

NEW ORLEANS, LA, DISTRICT

District comprises a portion of Louisiana, embraced in drainage basins tributary to Mississippi River and Gulf of Mexico, except Mississippi River above mile 325.5 above Head of Passes (AHP), drainage area of Ouachita-Black River Basin, and small eastern and western portions of Louisiana tributary to Pearl River and Sabine River and Lake. The New Orleans District territory encompasses 30,000 square miles.

It includes sections of the Gulf Intracoastal Waterway from Lake Borgne Light 29 at the mouth of Pearl River to Sabine River, and the Passes of the Mississippi River. It exercises jurisdiction over flood control work on Mississippi River from mile 325.5 AHP to Gulf of Mexico; Atchafalaya River; and in Atchafalaya Basin; and maintenance of project navigation channel of Mississippi River below mile 325.5 AHP, under supervision of President, Mississippi River Commission (MRC), and Division Engineer, Mississippi Valley Division.

IMPROVEMENTS

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1. INNER HARBOR NAVIGATION CANAL LOCK, LA

Location. The project is located within the city of New Orleans, Louisiana. It is a deep and shallow draft canal extending northward from the Mississippi River to Lake Pontchartrain.

Existing project. The existing Inner Harbor Navigation Canal Lock, built in 1920 by the Port of New Orleans, has dimensions of 31.5 feet deep, 75 feet wide, and 640 feet long (usable length). It passes barge traffic between the Mississippi River and the Gulf Intracoastal Waterway and is a vital link in the nation's Inland Waterway System. Delays to the navigation traffic average about 11 hours, with 24-36 hour delays common. The average yearly tonnage through the lock is about 22 million tons, 2/3 of which is coal, petroleum products, and crude petroleum. Other major commodities include metallic ores, industrial chemicals and non-metallic minerals. Two major vehicular roadway bridges (Claiborne and St. Claude Avenues) and one railroad/roadway bridge (Florida Avenue) cross the canal in the vicinity of the existing lock. The Corps of Engineers bought the lock from the Port of New Orleans in 1985.

Local cooperation. The cost sharing for the replacement lock is specified in the Water Resources Development Act of 1986. The costs of the new lock were apportioned between general cargo navigation and inland navigation. Costs assigned to inland navigation are shared 50 percent from the Inland Waterway Trust Fund and 50 percent from regular Corps of Engineer's appropriations. Those costs assigned to general cargo navigation, will be cost shared 65 percent Federal and 35 percent non-Federal, with the Port of New Orleans, who signed a non-Federal Project Cooperation Agreement (PCA) in Sep. 2001. The Recommended Plan is 40 feet deep by 110 feet wide by 1200 feet long (usable length) and is estimated to cost \$672,000,000.

Terminal facilities. Two container ship berths and one other ship wharf are located on the canal in the vicinity of the existing lock.

Operations and results during the fiscal year. Detailed engineering and design for the replacement lock and Community Impact Mitigation Plan has continued. The demolition of East Side Industrial Area (TERC construction contract) continued in FY 04.

Condition as of Sep 30. Initiation of construction was authorized in the FY 99 Appropriations Act. Demolition of existing facilities on both banks of the

canal between Claiborne Ave. and Florida Ave. began in FY 01.

2. MISSISSIPPI RIVER-GULF OUTLET, LA

Location. In State of Louisiana and the territorial waters of the United States and extends from existing Inner Harbor Navigation Canal at a point 7,500 feet north of existing IHNC lock and about 11,000 feet from Mississippi River, to a turning basin south of Michoud, LA, and then as a land and water cut from turning basin south of Michoud, LA, southeasterly to and along south shore of Lake Borgne and through marshes to and through Chandeleur Sound to 38-foot contour in Gulf of Mexico. (Refer to NOAA Coast Charts Nos. 11340, 11360, 11363, 11369, 11371, and 11373. Also see MRC 1989 (57th edition) folio of maps, Mississippi River-Cairo, IL, to Gulf of Mexico, LA.)

Existing project. Provides for a seaway canal, 36 by 500 feet, extending 76 miles as a land and water cut from Michoud southeasterly to and along south shore of Lake Borgne, and across Chandeleur Sound to Chandeleur Island and increasing gradually to 38 by 600 feet in Gulf of Mexico, with protective jetties at entrance, a permanent retention dike through Chandeleur Sound, and a wing dike along islands as required. It also provides for an inner tidewater harbor consisting of 1,000-by 2,000-foot turning basin 36 feet deep at landward end of seaway canal, and a connecting channel 36 by 500 feet wide extending easterly along Gulf Intracoastal Waterway from turning basin, including construction of a suitable highway bridge with approaches to carry Louisiana State Highway 47 (formerly 61) over channel. Plan further provides for future construction of a channel and lock in the vicinity of the existing lock to furnish an additional connection between tidewater harbor and Mississippi River. (See "Inner Harbor Navigation Canal Lock, LA" for more details).

Reevaluation studies to determine the economic feasibility of continuing to maintain the 36-foot depth in the channel were initiated in FY 99, all at Federal expense. Concerns about increased maintenance dredging costs and ecosystem deterioration prompted the study.

Local cooperation. Requirements of local cooperation are fully described on page 11-4 of FY 1986 Annual Report.

Terminal facilities. A public facility on the waterway is the Public Bulk Terminal of New Orleans constructed by Board of Commissioners, Port of New Orleans, on left descending bank at Mile 63. Two

container ship berths are in operation at the Industrial Canal end of the seaway.

Operations and results during fiscal year. Five dredging contracts for removal of material from the channel at a cost of \$18,507,870 were awarded in FY 04.

Condition as of Sep. 30. Construction was initiated March 1958. The channel unit is 90 percent complete and the shiplock unit is 0 percent complete. The total project is 75 percent complete. The channel was opened to navigation Jul. 25, 1963, and completed Jan. 20, 1968. Paris Road Bridge was opened to traffic Jul. 21, and completed Nov. 14, 1967. The foreshore protection, south bank, Chalmette Area, Station 367+00 to Station 1007+00 is complete.

3. MISSISSIPPI RIVER SHIP CHANNEL, GULF TO BATON ROUGE, LA

Location. The project is located in the southeastern portion of Louisiana below Baton Rouge, and consists of the Mississippi River and its major outlet to the Gulf of Mexico, Southwest Pass.

Existing project. Provides more efficient deep-draft navigation access to the New Orleans and Baton Rouge reaches of the Mississippi River via Southwest Pass by enlarging the existing channel to a project depth of 55 feet and enlarging the adjacent channel along the left descending bank in New Orleans Harbor to a 40-foot depth, a turning basin at Baton Rouge, and training works in the passes to reduce maintenance.

Estimated cost of existing project (Oct. 1, 2002) is \$189,800,000 Federal and \$475,000,000 non-Federal. In addition, the Coast Guard is to provide navigation aids at an estimated cost of \$1,200,000.

Local cooperation. Requirements are described in full on pages 11-2 and 11-3 of the FY 92 Annual Report.

A third supplement to the LCA addressing the Permanent Saltwater Intrusion Mitigation Plan was executed on May 28, 1993.

A Project Cooperation Agreement (PCA) between the Government and the State of Louisiana was executed on Sep. 3, 1993 which provides for the dredging of a 45-foot channel from Mile 181 AHP to Baton Rouge.

Operations and results during fiscal year. Construction is underway on the permanent mitigation plan.

The permanent mitigation plan consists of the Government constructing an underwater sill, when needed, at Mile 64 AHP to prevent the intrusion of saltwater into water supplies of the metropolitan New Orleans area. The plan also provides for upgrading the Plaquemines Parish water distribution system to provide fresh water to water treatment plants impacted by increased saltwater intrusion caused by the deeper channel. A supplemental LCA for this work was executed on May 28, 1993. The underwater sill was constructed during FY 99 due to extremely low flows in the river which allowed salt water to threaten up river water supplies. The sill was successful in preventing impacts to these facilities.

We have initiated work on the General Design Memorandum for the remaining authorized features of the project. This includes the deepening of the Mississippi River to 55 feet from the Gulf of Mexico to Baton Rouge.

Condition as of Sep. 30. The 45-foot channel is completed from the Gulf to Baton Rouge. Construction of the permanent mitigation plan is underway. Work on the General Design Memorandum for the remaining authorized features continues.

4. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Sec. 107, Public Law 86-645, as amended (preauthorization).

Preauthorization studies costs for FY 02 were Section 107 Coordination, \$10,000, Port Fourchon Extension for \$19,507, Short Cut Canal for \$18,978 and Cameron Oil Port for \$27,218.

Flood Control

5. AMITE RIVER AND TRIBUTARIES, LOUISIANA, EAST ROUGE PARISH WATERSHED

Location. In East Baton Rouge Parish, LA, consisting of the following five watersheds in the metropolitan Baton Rouge area: Jones Creek, Ward Creek, Bayou Fountain, Beaver Bayou, and Blackwater Bayou.

Existing project. The project will provide protection to residents of the metropolitan Baton Rouge area by reducing stages in the five waterways through clearing and snagging, earthen channel improvement and concrete lining of the waterways. The authorized project consists of modifying approximately sixty-six (66) total miles of channel. This involves approximately

twenty-five (25) miles of minimal channel clearing and snagging, twenty-four (24) miles of earthen channel enlargement, and seventeen (17) miles of channel concrete lining. Included in the proposed construction are sixty (60) miles of stream bank aesthetic tree planting. Fish and wildlife mitigation features consist of the reforestation of 397 acres of cleared land to compensate for an estimated 280 acres of bottomland hardwoods that would be lost to project construction. The authorized channel modifications for Beaver Bayou, Ward Creek, and Bayou Fountain are designed to have a ten percent chance of being out of bank in any one year. Blackwater Bayou and Jones Creek channel modification are designed to have a four percent and two percent chance, respectively, of being out of bank in any one year. The proposed project would reduce the extent of the Federal Emergency Management regulatory flood plain throughout the area. The estimated first costs at the October 2002 price levels are \$167,705,000 (\$108,408,000 – Federal, \$59,297,000 – non-Federal).

Local cooperation. The cost sharing provisions contained in the Water Resources Development Act of 1999 require that local interests shall provide cost sharing in accordance with the Chief of Engineers report dated December 23, 1996. The project requires that the local sponsor provide all land, easements, rights-of-way, relocations, and disposal areas (LERRD's) needed for project construction. In lieu of a portion of the cash contribution, the sponsor will perform work-in-kind, including design, construction and management of the proposed channel modifications for the Bayou Fountain Watershed, and perform all necessary clearing and snagging for channel modification on Beaver Bayou, Blackwater Bayou, Weiner Creek and Dawson Creek. Cost sharing for the flood damage reduction features is in accord with the cost sharing specified by the Water Resources Development Act of 1986 (WRDA 1986), as amended by Section 202(a) and 202(c) of the Water Resources Development Act of 1996 (WRDA), and the Consolidated Resolutions Appropriation 2003.

Condition as of Sep. 30. A Post Authorization Change has been submitted for HQUSACE review. Once the PAC has been approved, a supplemental Chief's report is anticipated that would increase the work-in-kind provisions.

6. COMITE RIVER (DIVERSION), LA

Location. In East Baton Rouge Parish, LA, between the Comite River and the Profit Island Chute of the Mississippi River, north of the town of Baker, LA, and south of the town of Zachary, LA.

Existing project. The project will provide protection for residents of the Comite River Basin by reducing stages in the river below the diversion point for events up to the 100-year flood event, and containing within banks events up to the 10-year flood event. The authorized project consists of construction of an eight-mile diversion channel from the Comite River to an outfall into Lilly Bayou, and then a four-mile diversion along Lilly and Cooper Bayous to the Profit Island Chute of the Mississippi River. The project also includes a diversion structure in the new channel near the diversion point, and an outfall structure near and at the outfall into Lilly Bayou, and four control structures at the intersections of Whites, Cypress and Baton Rouge Bayous, the fourth near McHugh Road. Disposal areas will be constructed along both banks of the new channel to retain the flood waters from the Comite River along both side of the new channel, and clearing and snagging of White, Cypress and Baton Rouge Bayous north of the diversion channel will also be done. Mitigation for the project includes the planting of trees on cleared land near the diversion point and on portions of the disposal area, the protection and management of existing forested lands near the diversion point. Upgrading two gauging stations and installing six new gauging stations to assist in flood prediction is also included in the project. The current approved cost of the project is \$163,000,000, including \$115,000,000 Federal cost and \$48,000,000 non-Federal cost. The Water Resources Development Act of 1999 authorized the Secretary to include the costs of highway relocations to be cost shared as project construction features.

Local cooperation. The cost sharing provisions contained in the Water Resources Development Act of 1986 require that local interests shall: (a) Provide to the Federal Government all lands, easements, rights-of-way, and dredged material disposal areas, and perform the necessary relocations required for construction, operation, and maintenance of the project (Current estimate is \$39,610,000); and (b) Provide to the Federal Government a cash contribution equal to 5 percent of the total cost of the project, excluding cultural resources (Current estimate is \$8,390,000). The total cost of items (a) and (b) mentioned above is limited to 50 percent of the total cost of the project.

Operations and results during the fiscal year. In FY 03, efforts continued with preconstruction engineering and design and the award of the Lilly Bayou Control Structure.

Condition as of Sep. 30. Construction for the Lilly Bayou Control Structure, Phase 1, was completed in FY04. Construction for Lilly Bayou Control Structure Phase II was initiated in FY04, as well as continuing

right-of-way acquisition and E&D of other project features.

7. GRAND ISLE AND VICINITY, LA

Location. In south Jefferson Parish, LA, along the Gulf of Mexico, about 50 miles south of New Orleans and 45 miles northwest of Southwest Pass (Mississippi River).

Existing project. The project provides protection from waves driven by hurricanes that have a frequency of recurrence of up to once in every 50 years. The plan consists of a berm and vegetated dune extending the length of Grand Isle's gulf shore and a jetty to stabilize the western end of the island at Caminada Pass. The dune has a 10-foot-wide crown at an elevation of 11.5 feet National Geodetic Vertical Datum (NGVD), 1 on 5 side slopes, and protective vegetation. The sandfill berm slopes from an elevation of 8.5 feet NGVD at the toe of the dune 180 feet gulfward to an elevation of 3 feet NGVD and, from this point, assumes its natural slope to the offshore bottom. The jetty provided by the plan has a top width of 6 feet at an elevation of 4 feet mean sea level, 1 on 2 side slopes, and extends approximately 3,600 feet along the western end of the island at Caminada Pass. Estimated cost of project (October 1991) is \$20,933,000 Federal and \$12,567,000 non-Federal, including \$7,157,484 contributed funds. The repair and restoration of Grand Isle were accomplished by two separate contracts. The jetty extensions and sand bar removal contract (partial fix), was completed in early 1988. The dune repair and structural reinforcement contract was physically completed Sep. 4, 1991. The project has been turned over to the State of Louisiana for operation and maintenance.

The 1992 Dire Emergency Supplemental Appropriations Act provided funds to repair damage to the wave berm and dune caused by Hurricane Andrew and to add offshore breakwaters to the project as an integral part of the repair. The original plan was to construct 27 breakwater segments; however, only 23 breakwater segments were constructed due to limited federal funds. 19 additional breakwater segments were built in the summer of 1999 by the local sponsor.

Local cooperation. The existing sand and beach dune have been damaged as a result of a series of storms between 1998 and 2002. PL-99 Federal assistance was approved to repair the damages caused by the latest Hurricane Lili and Tropical Storm Isidore. A sponsor's contractor will do the renourishment and the Corps will reimburse the 12% cost share. Renourishment is scheduled for completion in June 2005.

NORTH SHORE PROJECT

The Water Resources Development Act of 1996 authorized construction of \$17 million of additional improvements to the region subject to approval of a report justifying the improvements. The District received \$250,000 to initiate the study. The study is considering improvements, building breakwaters along the north side of the island, and the north side of Fifi Island.

The Water Resources Development Act of 1999 authorized the Secretary to consider shore protection benefits that the project provides to the main land coast of Louisiana.

The study is continued in FY 03 with a Congressional aid of \$213,000.

8. LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION)

Location. In southeastern Louisiana, vicinity of New Orleans, in St. Charles, Jefferson, Orleans, St. Bernard, and St. Tammany Parishes, comprising lower land and water area between the Mississippi River alluvial ridge and the Pleistocene escarpment to north and west. The dominant topographic feature is Lake Pontchartrain, a shallow tidal basin, about 640 square miles in area and averaging 12 feet deep, connecting with lesser Lake Maurepas to the west and through Lake Borgne and Mississippi Sound to the Gulf to the east. The lake drains about 4,700 square miles of tributary area. (Refer to Geological Survey quadrangles Yscloskey and Malheureaux Point, Drum Bay, Door Point, Lake Eugenie, Oak Mound Bayou, Mitchell Keys, Lake Elroi, and Morgan Harbor; Engineer quadrangles Slidell, Covington, Ponchatoula, Springfield, Denham Springs, Donaldsonville, Mt. Airy, Bonnet Carre', Spanish Fort, Chef Menteur, Rigolets, St. Bernard, New Orleans, and Hahnville; and Coast and Geodetic Survey Charts Nos. 1115 and 1116.

Existing project. Provides protection to that part of the greater New Orleans area east of the Mississippi River and other communities bordering Lake Pontchartrain from the effects of hurricane-generated floods. The project is comprised of two major features: The Chalmette Area Plan and the High Level Plan. The Chalmette Area Plan consists of a levee and floodwall system around the Chalmette area and along the Mississippi River-Gulf Outlet, with connections to the Mississippi River levees. The High Level Plan provides for heightening and strengthening the existing hurricane protection levee systems in Orleans Parish and the east

bank of Jefferson Parish, repairing and rehabilitating the Mandeville Seawall in St. Tammany Parish; building a new mainline hurricane levee on the east bank of the St. Charles Parish just north of U.S. Highway 61 (Airline Highway); raising and strengthening the existing levee which extends along the Jefferson-St. Charles Parish boundary between Lake Pontchartrain and Airline Highway; and deferring construction of the proposed Seabrook lock until its feasibility as a feature of the Mississippi River-Gulf Outlet navigation project can be determined. Areas which will be enclosed by the levee and floodwall construction will be provided protection against tidal surge resulting from the Standard Project Hurricane (SPH). The estimated project cost for work (October 2004) is \$528,000,000 Federal and \$210,000,000 non-Federal.

Local cooperation. Requirements are described in full on page 11-5 of the FY 92 Annual Report.

Operations and results during fiscal year. Preparation of design memorandums and plans and specifications continued by hired labor, Architect-Engineer Contractors, and the local sponsors.

A change from the original Barrier Plan to the current high level plan was approved in February 1985 by the Office, Chief of Engineers.

A draft mitigation report with corresponding EIS was prepared and distributed for public review on Mar. 16, 1988, and subsequently approved. The Louisiana Department of Natural Resources agreed to fund the Local Sponsor's share of mitigation and a segmented shoreline protection dike was constructed in FY 97.

Condition as of Sep. 30. Construction started May 1967 and is 90 percent complete. In FY 04, six construction contracts were ongoing in the project.

9. LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION)

Location. In coastal section of Louisiana, along Bayou Lafourche, and includes lands on both banks of the bayou from Larose to 2 miles south of Golden Meadow. (Refer to Geological Survey quadrangles Cutoff, Lake Felicity, Bay Dosgris, Golden Meadow Farms, Bay Tambour, Mink Bayou, Caminada Pass, Leeville, Belle Pass, Pelican Pass, and Calumet Island; Engineer quadrangles New Orleans, Hahnville, Point a la Hache, Barataria, and Fort Livingston; and Coast and Geodetic Survey Charts Nos. 1115 and 1116.)

Existing project. Provides a loop levee about 40 miles long along both banks of Bayou Lafourche from Larose to South Golden Meadow; enlargement of 3 miles of existing levee at Golden Meadow; floodgates for navigation and hurricane protection in Bayou Lafourche at upper and lower bayou crossings; about 8 miles of low interior levees to regulate intercepted drainage. Estimated cost for new work (October 2003) is \$81,000,000 Federal and \$35,000,000 non-Federal.

Local cooperation. Requirements are described in full on page 11-6 of the FY 92 Annual Report.

Operations and results during fiscal year. The Leon Theriot Lock model study and evaluation report was completed in FY04.

Condition as of Sep. 30. In FY 04, the evaluation report for the Leon Theriot Lock was completed.

10. NEW ORLEANS TO VENICE, LA, HURRICANE PROTECTION

Location. Includes land subject to inundation by hurricane tides extending along both banks of the Mississippi River below New Orleans from vicinity of Phoenix to Venice, LA.

Existing project. Provides for improvements along Mississippi River below New Orleans, LA, for prevention of hurricane tidal flood damages by increasing heights of existing back levees and modifying existing drainage facilities where necessary in three separate reaches: Reach A, on the west bank from St. Jude to Tropical Bend, 18 miles, 4,340 acres protected; Reach B, on the west bank from Tropical Bend to Venice, 21 miles, 4,900 acres protected; and Reach C, on the east bank from Phoenix to Bohemia 16 miles, 5,470 acres protected, and raising the river levee on the west bank (MR&T levee) from City Price to Venice, to a grade high enough to prevent overtopping by tidal surges from the east, generally called the West Bank River Plan. Reach B was later divided into two units, Reach B-1 from Tropical Bend to Fort Jackson and Reach B-2 from Fort Jackson to Venice, LA, as a result of a request made by the local agency.

Estimated cost of new work (October 2004) is \$177,000,000 Federal and \$76,000,000 non-Federal.

Local cooperation. Provide all lands, easements, and rights-of-way including borrow areas and spoil disposal areas necessary for the construction of the project; accomplish all necessary alterations and relocations to roads, pipelines, cables, wharves, and other facilities required by the construction of the project;

bear 30 percent of the first cost, and cash contribution or equivalent work to be paid either in a lump sum prior to initiation of construction or in installments prior to start of pertinent work items.

The local sponsor has requested that an area extending from the upstream limits of Reach A at City Price to St. Jude, Louisiana be incorporated into the project. This work involves upgrading 3.3 miles of existing non-Federal levees to project standards. The local sponsor has elected to pay all of the costs of this reach of levee. While the sponsor will not receive credit for these costs, the increased protected area is eligible for Federally subsidized flood insurance. Savings to the project achieved by a portion of levee no longer being required at the upstream end of Reach A, is creditable to the local sponsor. A Post Authorization Change report was prepared for this reach and was approved by the Lower Mississippi Valley Division on Mar. 6, 1992. Supplemental assurances for the City Price to St. Jude reach were accepted on Feb. 18, 1993.

Assuring Agency: Plaquemines Parish Government. Assurances for all reaches of the project have been furnished.

Operations and results during fiscal year. Construction continued on West Bank Mississippi River Levee (WBMRL), Sta. 1319-1797, 2nd Enlargement.

Condition as of Sep. 30. Construction began on the project in September 1968 and the total project is approximately 80 percent complete.

11. SOUTHEAST LOUISIANA URBAN DRAINAGE PROJECT (FLOOD CONTROL)

Location. The authorized project is located in Orleans, Jefferson, and St. Tammany Parishes. Features in Orleans Parish (city of New Orleans) are located on the east bank of the Mississippi River. Work in Jefferson Parish is located on the east and west banks of the Mississippi River in the vicinity of New Orleans, LA. St. Tammany Parish features are located in the southern portion of the parish, near Lake Pontchartrain, in and around the communities of Slidell, Mandeville, Madisonville, Abita Springs, and Lacomb, LA.

Project features. The work in Orleans Parish consists of enlargement of a major pumping station and work on two other stations; and improvements to about seven drainage canals and underground drainage lines. Jefferson Parish features include improvements to five pumping stations and almost thirty drainage canals. Work in St. Tammany includes: channel improvements, retention ponds, levees, and structure raising.

Local cooperation. The project requires that the local sponsor(s) provide all lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) needed for project construction, as well as a minimum five percent cash contribution. The total (value) of the locals share must be a minimum of twenty-five percent of the project total, but not exceed fifty percent of the project total. Jefferson Parish and the Sewerage and Water Board of New Orleans executed the Project Cost-sharing Agreements (PCAs) in January 1997.

Operations and results during fiscal year. Local interests in Jefferson and Orleans parishes continued (and in some instances, completed) some of the design and construction of features authorized in the project, for which they will get credit. Architect-Engineer contractors, working for both the Corps and the parishes, are doing most of the design work. Federal construction began in March 1997.

In 2003, eight additional investigations continued, four in Jefferson Parish and four in Orleans Parish, to determine whether there are more Federally justified plans for improving drainage. These studies are required to justify additional improvements to Orleans and Jefferson primary drainage systems.

Condition as of Sep. 30. Funding constraints in FY 03 prevented the award of any new contracts. Construction continued on 19 ongoing contracts. Unfunded liabilities of \$7.0 mil were paid in FY 04.

12. WEST BANK AND VICINITY, NEW ORLEANS, LA, HURRICANE PROTECTION

Location. The project is located in Jefferson, Orleans and Plaquemines parishes on the West Bank of the Mississippi River in the vicinity of New Orleans, Louisiana.

The project area generally extends from the Jefferson-St. Charles Parish line to the community of Oakville in Plaquemines Parish and is bounded by the Mississippi River on the north and east and Lakes Cataouatche and Salvador and the GIWW on the south and west. The original project was from Westwego to Harvey Canal but has been expanded to include the area East of Harvey Canal and also the Lake Cataouatche area. These two areas were authorized by WRDA 96.

Existing project. The total project consists of about 57 miles of new and enlarged earthen levee, 9 miles of floodwall, a navigable floodgate in the Harvey Canal below Lapalco Boulevard, a discharge channel and 1,000 cfs capacity increase at the Cousins Pump Sta-

tion. The protection is designed to protect against tidal floodwaters resulting from the Standard Project Hurricane (SPH).

The elevation of the SPH protection varies from 9 feet NGVD to 12 feet NGVD. The project plan includes mitigation which consists of the construction of a timber pile and tire breakwater on the west bank of Lake Cataoutache adjacent to the Salvador Wildlife Management Area and the acquisition of approximately 1,300 acres of forested wetlands which will be managed to improve habitat quality.

The estimated project cost (October 2004) is \$314,000,000. (\$204,000,000 Federal and \$110,000,000 non-Federal).

Local cooperation. The project requires that the local sponsor provide all lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) needed for project construction. The total (value) of the sponsors share must be a minimum thirty-five percent of the total project costs, in cash or creditable work.

Funds provided by non-Federal interests for interim hurricane protection on the Westwego to Harvey Canal area may be considered beneficial expenditures and may be credited as part of the non-Federal contribution of the project pursuant to the WRDA of 1986.

The Louisiana Department of Transportation and Development and West Jefferson Levee District executed amendment number 1 of the local cooperation agreement in April 1999.

Operations and results during fiscal year. Two construction contracts were awarded during FY 04 in the West Bank and vicinity project.

Conditions as of September 30. Project construction began in February 1991 and the total project is approximately 36 percent complete.

13. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Various hurricane protection projects, as well as small flood control projects, were inspected during FY 04. Also, periodic inspection and continuing evaluation of completed civil works structures was conducted in accordance with ER 1110-2-100, at various times during the year on an as needed basis.

Fiscal year costs for the period were \$428,352. Total costs to Sep. 30, 2004 were \$7,422,650.

14. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Emergency flood control activities—repair, flood fighting, and rescue work. (Public Law 99, 84th Cong., and antecedent legislation.)

Disaster preparedness, fiscal year costs for the period were \$464,577. There were no emergency or rehabilitation cost for FCCE in FY 04.

See Table 11-F.

15. PROTECTION OF NAVIGATION

During FY 04, operation and maintenance costs were \$22,960 on Project Condition Surveys.

16. CATASTROPHIC DISASTER PREPAREDNESS PROGRAM

During FY 04, operation and maintenance costs were \$0 on Local Preparedness; \$134,397 on National Preparedness; \$0 on National Emergency Facilities; and on Disaster Training and Exercise. Total costs for FY04 were \$134,397.

17. COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION

Location. The coastal parishes of Louisiana.

Authority. Activities were authorized by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) (Title III of Public Law 101-646, dated Nov. 29, 1990), which established the Louisiana Coastal Wetlands Conservation and Restoration Task Force. The Task Force consists of the Secretary of the Army (chairman); the Administrator of the Environmental Protection Agency; the Governor of the State of Louisiana; the Secretary of the Interior; the Secretary of Agriculture; and the Secretary of Commerce.

Local cooperation. The conditions of local cooperation are established by this act.

Condition of Sep. 30. The first Priority Project List (PPL) was approved by the Task Force on Oct. 31, 1991. Fourteen projects were named on the list. Funds in the amount of \$37.5 million (\$28.1 million Federal, \$9.4 million State) were made available for construction of these projects. The Task Force has given final approval for construction for all 14 projects. Of the 14 projects, construction has been completed on all 14: Vegetative Plantings - West Hackberry Planting Demo,

Mar. 94; Vegetative Plantings - Timbalier Island Planting Demo, July 96; West Bay Sediment Diversion, Nov 03; Bayou Labranche Wetlands Restoration, Apr. 94; Cameron Prairie Refuge Shoreline Protection, Aug. 94; Sabine Wildlife Refuge Erosion Protection, Mar. 95; Vermilion River Cutoff Bank Protection, Feb. 96; Lake Salvador Shoreline Protection at Jean Lafitte, Mar. 96; Bayou Sauvage #1, May 96; Barataria Bay Waterway Marsh Creation, October 96; Vegetative Planting Demo, December 96; Cameron-Creole Watershed Hydrologic Restoration, Jan. 97; Isles Dernieres (Phase 0), June 99; and GIWW Clovelly Wetland Restorations, Oct. 00.

The 2nd PPL was approved by the Task Force on Oct. 19, 1992. Fifteen projects were named on the list. Additional funds in the amount of \$41.9 million (\$28.2 million Federal, \$13.7 million State) were made available for construction of these projects. The Task Force has given final approval for construction for 14 of the 15 projects. Of the 15 projects, construction has been completed on 12: Vermilion Bay/Boston Canal, Nov. 95; Mud Lake, Jun. 96; Clear Marais Bank Protection, Mar. 97; Point Au Fer, May 97; Bayou Sauvage #2, May 97; Atchafalaya Sediment Delivery, Mar. 98; Freshwater Bayou, Aug. 98; Big Island Mining, Oct. 98; and Isles Dernieres (Phase 1), Jun. 99; Hwy 384, Jan. 2000; Fritchie Marsh, Mar. 01; and Caernarvon Diversion Outfall Management, Jun 02. Two projects, Jonathan Davis and West Belle Pass Headland Restoration, are under construction.

The 3rd PPL was approved by the Task Force on Oct. 1, 1993. Seventeen projects were named. Additional funds in the amount of \$37.3 million (\$29.9 million Federal, \$7.4 million State) were made available for construction of these projects. Engineering and design of several of the projects has been completed, and the Task Force has given final approval for construction for 11 of the 17 projects. Of the 11 projects, construction has been completed on 9 projects; Channel Armor Gap Crevasse, Nov. 97; Lake Salvador Shore Protection, Jun. 98; Cote Blanche, Dec. 98; MR-GO Back Dike, Jan. 99; Lake Chapeau, May 99; Brady Canal, May 00; Whiskey Island, Jun. 00; East Timbalier Island Restoration #1, May 01, and Sabine Refuge Structure - Hog Island, Sept 03. One project is under construction: Cameron - Creole Maintenance. Six projects were deauthorized.

The 4th PPL was approved by the Task Force on Dec. 16, 1994. Ten projects were named on the list. Additional funds in the amount of \$32.2 million (30.0 million Federal, \$2.2 million State) were made available for construction of these projects. The Task Force has given final approval for construction for four of the

ten projects. Construction has been completed on four of the 4th PPL projects, Perry Ridge Bank Protection, Feb. 99; East Timbalier Island Restoration #2, Jan 00; Plowed Terraces Demo, Aug. 00; and Barataria Bay Waterway Bank Protection West, Nov. 00. Six projects have been deauthorized.

The 5th PPL was approved by the Task Force on Feb. 28, 1996. Nine projects were named on the list. Additional funds in the amount of \$40.8 million (\$33.4 million Federal, \$7.4 million State) were made available for construction of these projects. Engineering and design on several of the projects has been completed, and the Task Force has given final approval for construction for six of the nine projects. Six projects have been completed, Racoon Island Breakwaters Demo, Jul. 97, Freshwater Bayou Bank Stabilization, Jun. 98, Little Vermilion Bay Sediment Trapping, Aug. 99; Bayou Chevee, Dec. 01; Naomi Outfall Management, Jul. 02; and Sweet Lake/Willow Lake, Oct. 02.

The 6th PPL was approved by the Task Force on April 24, 1997. Thirteen projects were named on the list. Additional funds in the amount of \$44.6 million (39.1 million Federal, \$5.5 million State) were made available for construction of these projects and to fund 5th PPL phased projects. Engineering and design on several of the projects has been completed and seven projects have completed construction: Cheniereau Tigre Sediment Trapping, Nov 01; Black Bayou Hydrologic Restoration, Nov 01; Nutria Harvest for Wetland Restoration Demo, Oct 03; Barataria Bay Water Bank Protection (East), May 01; Marsh Island Hydrologic Restoration, Dec. 01; Flexible Dustpan Demo, Jun. 02; and Oaks/Avery Canals Hydrologic Restoration, Oct. 02. Two projects are under construction: Sediment Trapping at the Jaws, and Delta-Wide Crevasse.

The 7th PPL was approved by the Task Force on Jan. 16, 1998. Four projects were approved on the list. Additional Federal funds in the amount of \$45.8 million (\$42.5 million Federal, \$3.9 million State) were made available for construction of these projects. Engineering and design on several of the projects has been completed. Construction has been completed on three projects, Thin Mat Float and Marsh Enhancement Demo, May 00; Grande Terre, Jul. 01; and Pecan Island Terracing, Sept 03. The remaining project, Barataria Basin Landbridge, Phase 1 and Phase 2, is currently under construction.

The 8th PPL was approved on Jan. 20, 1999. Six projects were approved on the list. Additional funds in the amount of \$44.2 million (\$41.9 million federal, \$3.2-million state) were made available for construction of these projects. Engineering and design on several

projects has begun. Construction of four projects has been completed: Sabine Refuge Marsh Creation – Cycle 1, Feb 02; Humble Canal Hydrologic Restoration, Mar 03; Lake Portage Land Bridge, May 04; Hopedale Hydrologic Restoration, Oct 04.

The 9th PPL was approved on Jan. 11, 2000. Nineteen projects were approved on the list. However, starting with PPL 9, the Task Force implemented cash flow management policy in which only the Phase 1 design of the projects was approved by the Task Force. After Phase 1 design is completed, the Phase 2 construction of the projects will need separate approval by the Task Force. Additional funds in the amount of \$52.9 million (\$47.9 million Federal; \$10.5 million State) were made available for construction of the projects. Ten projects have been approved to proceed to Phase 2 construction. Of the ten projects, construction on four projects has been completed: Chandeleur Islands Restoration, Jul 01; Perry Ridge to Texas, Jul 02; Mandalay Bank Protection, Sep 03; Four Mile Canal Terracing and Sediment Trapping, May 04. Three projects, Barataria Basin Landbridge Shoreline Protection #3, Black Bayou Culverts, and Timbalier Island Dune/Marsh Restoration, are currently under construction.

The 10th PPL was approved on Jan. 10, 2001. Twelve projects were approved for Phase 1 design on the list. Additional funds in the amount of \$52.1 million (\$47.7 million Federal; \$4.6 million State) were made available for construction of the projects. Five projects have received Phase II approval: Construction on one project has been completed: Grand-White Lakes Landbridge Restoration, Oct 04. Two projects, East Sabine Lake Hydrologic Restoration and North Lake Merchant Landbridge Restoration, are currently under construction.

The 11th PPL was approved Jan. 16, 2002. Thirteen projects were approved for Phase I design on the list. Additional funds in the amount of \$87.3 million (\$57.3 million Federal; \$30.0 million State) were made available for construction of the projects. Six projects received Phase II approval. Construction on one project has been completed: Holly Beach, Mar 03 and one project is currently under construction: Coastwide Nutria Control Program.

The 12th PPL was approved by the Task Force on January 16, 2003. Phase I funds in the amount of \$8.4 million were approved for six projects. Additional funds in the amount of \$53.5 mil (\$51.9 Fed and \$1.6 State) were made available. Of the six projects, Freshwater Floating Marsh Creation Demo is the only project currently under construction.

The 13th PPL was approved by the Task Force on Jan 28, 2004. Phase I funds in the amount of \$8.6 million were approved for four projects and one demonstration project.

In response to Section 303(b) of the CWPPRA, the Louisiana Coastal Wetlands Restoration Plan report was published in November 1993. Following public review of the final report, a Record of Decision was prepared, signed by the Task Force chairman and submitted to HQUSACE for transmittal to the ASA(CW). The report proposed \$1.3 billion worth of projects that could prevent 65 percent of the coastal wetland losses over the next 20 years.

The State of Louisiana expressed its intention (by letter of Jan. 5, 1993) to develop a Conservation Plan in accordance with provisions of the CWPPRA. Once approved (by the Administrator of the EPA, the Director of the U.S. Fish and Wildlife Service, and the Secretary of the Army), the State's share in project construction will be reduced from 25 percent to 15 percent. The State submitted the plan to the approving agencies in May 1997. Approval was received on Nov. 21, 1997.

Section 532 of the Water Resources Development Act (WRDA) of 1996 amended the CWPPRA to provide for a further reduction in the State's share of CWPPRA projects. Upon approval of the Conservation Plan, the State's share of projects in 1996 and 1997 changed to 10 percent. In a Sep. 3, 1996, speech in the House of Representatives, the Honorable Bud Shuster of Pennsylvania said that the intent of the legislation was to reduce the State's share of projects approved on the 5th and 6th Priority Project Lists. The amendment further provides that the Secretary of the Army must determine that a reduction in the non-Federal share is warranted.

In June 1997, the Task Force initiated a coast-wide grassroots planning effort termed the Coast 2050 initiative to develop a technically sound strategic plan to sustain coastal resources and provide an integrated multiple use approach to ecosystem management. The Coast 2050 plan differs from the 1993 restoration plan in that regional strategies, rather than basin strategies, will be developed and prioritized. Coast 2050 was completed in December 1998 and supports the Louisiana Coastal Area authority, Louisiana Ecosystem Restoration reconnaissance report, which was approved by HQUSACE in May 1999. During FY 2003, a Comprehensive Coast-wide Ecosystem Restoration Study investigated the feasibility of implementing large-scale restoration plans coast-wide, estimated to cost \$15 billion.

In Feb 2004, the Administration directed the Corps to refocus LCA from a larger comprehensive ecosystem restoration plan to one more near-term in nature that presents a strategy for a 10-year or so increment of highly cost-effective projects targeting critical need areas in coastal Louisiana. Revisions were made and a draft report was submitted for public review in July 04. A series of nine public meetings were held along coastal Louisiana as well as in Memphis, Bay St. Louis, and Beaumont. The public review and comment period ended 23 Aug 04. Comments received on the draft were addressed and incorporated into a final report to be published Nov 04.

The recommended plan will significantly reduce the loss of about ten square miles of wetlands per year over

the next fifty years and beyond. The plan consists of five projects recommended for conditional authorization, a science and technology program, demonstration projects, investigations of potential project modifications, beneficial uses of dredged material, and further studies of large-scale projects. In addition, another ten restoration projects will be conducted under previously adopted resolutions.

18. GENERAL REGULATORY PROGRAM

Permit Evaluation	\$4,659,445
Enforcement	432,811
Environmental Inspection Statement	0
Appeals	<u>5,964</u>
Total General Regulatory Program	\$5,098,220

TABLE 11-A COST AND FINANCIAL STATEMENT

See Section in Text	Project	Funding	FY00	FY01	FY02	FY03	FY04	Total Funds to Sep 30, 2004
1	IHNC	New Work						
		Approp	0	3,105,500	8,275,400	8,879,500	5,384,000	49,094,000
		Cost	0	3,105,500	8,112,636	8,853,546	5,553,692	49,074,974
	IWWTF	Maint						
		Approp	7,261,000	19,295,000	8,275,400	8,879,500	5,384,000	49,094,000
		Cost	6,071,859	19,179,000	9,207,248	9,251,305	5,309,781	49,019,781
2	MRGO	New Wk						
		Approp	300,000	369,000	568,000	538,000	739,000	82,370,000
		Cost	372,297	289,445	773,800	581,005	724,000	81,370,000
	(Reg Funds)	Maint						
		Approp	15,970,000	20,300,731	11,593,000	11,535,000	21,339,234	357,126,435
		Cost	15,993,423	19,270,229	12,368,636	11,794,324	21,318,088	229,226,867
3	MRSC	New Wk						
		Approp	1,286,000	1,653,000	156,000	16,600	196,000	27,743,000
		Cost	1,577,854	1,516,510	351,900	26,736	63,293	27,655,293
	(Contrib Funds)	New Wk Contrib Cost						
4	Port Fourchon	New Wk						
		Approp	373,000	2,189,000		287,000		
		Cost	30,665	2,421,345	110,000	286,885		
	Contrib Funds	New Wk Approp Cost	1,341,000	264,000				
				1,534,243				
5	Amite Riv & Trib	New Wk						
		Approp Cost			615,000	757,000		
					557,100	809,563		
6	Comite River	New Wk						
		Approp	930,000	1,250,000	3,181,000	4,949,000	4,153,000	20,215,000
		Cost	898,640	1,297,629	2,851,600	5,333,734	4,132,195	20,136,596
7	Grand Isle	New Wk						
		Approp	60,000	419,000	728,000	500,000	372,000	21,191,000
		Cost	23,809	139,989	617,500	501,071	415,746	21,185,208
		Maint						
		Approp Cost						
8	Lake Pontch	New Wk						
		Approp	26,204,000	14,295,000	9,134,219	10,163,400	7,274,000	444,668,000
		Cost	27,402,978	14,458,657	10,023,800	10,412,869	7,392,230	444,497,470
	Contrib Funds	New Wk Contrib Cost	4,600,000	1,000,000	600,000	1,600,000	4,013,500	157,373,000
			9,274,120	488,288	1,234,400	1,407,104	4,205,137	157,371,280

TABLE 11-A

COST AND FINANCIAL STATEMENT

See Section in Text	Project	Funding	FY00	FY01	FY02	FY03	FY04	Total Funds to Sep 30, 2004
9	Larose to Gold	New Wk						
		Approp	2,015,000	2,184,000	1,533,000	335,000	356,000	78,242,000
		Cost	2,030,154	2,298,922	1,627,500	333,794	351,860	78,239,613
	Contrib Funds	New Wk						
		Contrib	310,000	200,000	508,000		0	33,284,000
		Cost		498,371	408,800	53,365	29,917	33,254,000
10	N.O. to Venice	New Wk						
		Approp	2,150,000	1,843,000	1,245,000	2,635,000	1,813,000	152,764,000
		Cost	2,077,000	1,781,255	1,251,800	2,768,566	1,816,169	152,763,910
	Contrib Funds	New Wk						
		Contrib	100,000	2,500,000		2,110,000	1,924,000	25,857,000
		Cost	100,000			2,111,162	1,924,000	25,857,000
11	SELA	New Wk						
		Approp	47,263,000	81,960,000	59,711,000	38,907,000	26,956,000	380,918,000
		Cost	69,197,930	81,694,393	61,210,700	39,326,596	26,969,268	380,964,668
	Contrib Funds	New Wk						
		Contrib	720,000	12,773,514	11,808,399	9,768,775	4,925,291	103,005,000
		Cost	5,661,572	8,830,336	17,254,100	9,858,801	5,009,178	103,005,000
12	West Bank	New Wk						
		Approp	9,805,000	11,724,000	47,514,000	9,068,700	21,818,760	64,622,100
		Cost	6,324,919	13,986,259	8,768,990	9,551,032	21,286,730	64,600,528
	Contrib Funds	New Wk						
		Contrib		500,000		5,500,000	4,600,000	10,600,000
		Cost		500,000		5,500,000	4,169,611	10,169,611
17	CWPPRA	New Wk						
		Approp	52,907,300	52,659,220	62,332,369	56,938,097	59,023,130	596,925,178
		Cost	18,150,316	19,153,013	23,407,000	34,715,136	32,100,994	
	Contrib Funds	New Wk						
		Contrib	3,864,325	1,585,775	420,235	880,883	7,367,922	25,227,500
		Cost	1,734,222	1,741,830	2,291,695	255,664	1,047,865	13,595,563

11-14

**TABLE 11-B
(Continued)**

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	MISSISSIPPI RIVER SHIP CHANNEL, GULF TO BATON ROUGE, LA (See Sec. 3 of Text)	
Approp. Act of 1985, dated Jul. 2, 1986 (PL 99-88)	Will provide more efficient deep-draft navigation access to the New Orleans and Baton Rouge reaches of the Mississippi River via Southwest Pass by enlarging the existing channel to a project depth of 55 feet and enlarging the adjacent channel along the left descending bank in New Orleans Harbor to a 40-foot depth, a turning basin at Baton Rouge, and training works in the passes to reduce maintenance.	H. Doc. 2577, 99th Cong., 1st sess.
Nov. 17, 1986 (PL 99-662)	Formalizes the cost sharing provisions of the project, permits the State of Louisiana to enact user fees to defray their portion of the project costs, and implements harbor maintenance fees to help pay for the Federal cost of the project. It also provides an option to the local sponsor to defer their initial payment for one year following initiation of construction. In terms of channel depths up to 45 feet, the cost sharing requirements are 75 percent Federal and 25 percent non-Federal for construction and 100 percent Federal for maintenance. For channels deeper than 45 feet, the cost sharing requirements are 50 percent Federal and 50 percent non-Federal for both construction and maintenance.	Water Resources Development Act of 1986, 99th Cong., 2d sess.
	PORT FOURCHON, LA	
Water Resources Development Act, 1996	Provides a Federal navigation channel with a project depth of 24 feet MLLW in Bayou Lafourche, Belle Pass, and the Gulf of Mexico to improve navigation access to Port Fourchon at a total cost of \$4,440,000, with an estimated Federal cost of \$2,300,000 and an estimated non-Federal cost of \$2,140,000.	Public Law 104-303, 104th Congress (See Section 101) Oct. 12, 1996
	WATERWAY FROM INTRACOASTAL WATERWAY TO BAYOU DULAC, LA (Bayous Grand Caillou and LeCarpe, LA)	
Aug. 30, 1985	Channel 5 by 40 feet from Intracoastal Waterway at Houma through Bayou LeCarpe, Bayou Pelton, and Bayou Grand Caillou to Bayou Dulac, about 16.3 miles.	H. Doc. 206, 72d Cong., 1st sess.
Oct. 23, 1962	Channel 10 by 45 feet in Bayou LeCarpe from Gulf Intracoastal Waterway to Houma navigation canal.	
	BAYOU RIGOLETTE, LA	
Water Resources Development Act, 1986	A project to construct six additional floodgates at Bayou Rigolette, LA, adjacent to the existing drainage structure, at a total cost of \$2,300,000.	Public Law 99-662, Nov. 17, 1986
	AMITE RIVER AND TRIBUTARIES, LOUISIANA, EAST BATON ROUGE PARISH WATERSHED	
Water Resources Development Act, 1999 August 17, 1999	Amite River and Tributaries, Louisiana, East Baton Rouge Parish Watershed. The project for flood damage reduction and recreation, Amite River and tributaries, Louisiana, East Baton Rouge Parish Watershed: Report of the Chief of Engineers Dated December 23, 1996, a total cost of \$112,900,000, with an estimated Federal cost of \$73,400,000 and an estimated non-Federal of \$39,500,000.	Public Law 106-53 August 17, 1999

TABLE 11-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Water Resources Development Act, 1992	COMITE RIVER, LA (Diversion) (See Sec. 6 of Text) Construct an eight-mile diversion channel from the Comite River to an outfall into Lilly Bayou, and then a four-mile diversion along Lilly and Cooper Bayous to the Profit Island Chute of the Mississippi River. Also included a diversion structure in the new channel near the diversion point, and an outfall structure near and at the outfall into Lilly Bayou, and three control structures at the intersections of Whites, Cypress and Baton Rouge Bayous.	Public Law 102-580 Section 101 (11) Oct. 31, 1992
Water Resources Development Act, 1996		Public Law 104-305 Section 301(b)(5) Oct. 12, 1996
Energy and Water Development Appropriations Act, FY 1999	Provided funding authority in the amount of \$930,000 to initiate construction.	Public Law 105-245 Oct. 7, 1998
Adopted by Committee Resolutions Sep. 23, 1976, and Oct. 1, 1976 ²	GRAND ISLE AND VICINITY, LA (See Sec. 7 of Text) To provide hurricane protection by placement of a berm and vegetated dune extending the length of Grand Isle's gulf shore and a jetty to stabilize the western end of the island at Caminada Pass.	H. Doc. 639, 94th Cong., 2d sess.
Oct. 27, 1965	LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION) (See Sec. 8 of Text) Control of hurricane tides by construction of two independent units, the Lake Pontchartrain Barrier plan and the Chalmette Area plan.	H. Doc. 231, 89th Cong., 1st sess.
Section 107, Rivers and Harbors Act of 1960, as amended	NORTH PASS - PASS MANCHAC, LA The Corps of Engineers may construct small river and harbor improvement projects not specifically authorized by Congress when they will result in substantial benefits to navigation.	Public Law 86-645 Jul. 14, 1960
Water Resources Development Act, 1986 Nov. 17, 1988	LAKE PONTCHARTRAIN, NORTH SHORE, LA The project for navigation, Lake Pontchartrain North Shore, LA: Report of the Chief of Engineers, dated February 14, 1979, at a total cost of \$1,310,000, with an estimated first Federal cost of \$655,000 and an estimated first non-Federal cost of \$655,000.	Public Law 99-662, Nov. 17, 1986, 99th Cong., 2d sess.
Water Resources Development Act, 1992	LAKE PONTCHARTRAIN STORMWATER DISCHARGE, LA (See Section 9 of Text) Provides for design and construction of project to address water quality problems associated with stormwater discharges.	Public Law 102-580

TABLE 11-B
(Continued) **AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Oct. 27, 1965	<p>LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION) (See Sec. 10 of Text)</p> <p>A loop levee about 40 miles long along both banks of Bayou Lafourche from Golden Meadow to Larose; enlargement of 3 miles of existing levee at Golden Meadow; floodgates for navigation and hurricane protection in Bayou Lafourche at upper and lower bayou crossings; about 8 miles of low interior levees to regulate intercepted drainage; and seven multibarreled culverts controlled by flapgates.</p>	H. Doc. 184, 89th Cong., 1st sess. ¹
Oct. 27, 1965	<p>MORGAN CITY AND VICINITY, LA, HURRICANE PROTECTION</p> <p>Construction of new levees along Lake Palourde and Bayou Ramos, levee to tie-in with Bayou Boeuf lock levee and three gravity drainage structures in Morgan City unit and enlargement of bank levee, construction of new levee, and construction of one floodgate and five gravity drainage structures in Franklin and vicinity unit. The Franklin Area reparable element is currently under review for deauthorization in accordance with WRDA 1990.</p>	H. Doc. 167, 89th Cong., 1st sess.
Section 14, Flood Control Act of 1946	<p>MERMENTAU RIVER - GRAND CHENIER, LA (See Sec. 11 of Text)</p> <p>Construction of emergency bank-protection works to prevent flood damage to highways, bridge approaches and public works.</p>	Public Law 526, 79th Cong, 2d sess. Jul. 24, 1946
Oct. 23, 1962	<p>NEW ORLEANS TO VENICE, LA, HURRICANE PROTECTION (See Sec. 12 of Text)</p> <p>Improvements along Mississippi River below New Orleans, LA, for prevention of hurricane tidal flood damages by increasing heights of existing back levees and modifying existing drainage facilities where necessary in five separate reaches.</p>	H. Doc. 550, 87th Cong., 2d sess.
Energy and Water Development Appropriations Act, FY 1996	<p>SOUTHEAST LOUISIANA, LA (See Section 13 of text)</p> <p>Provides for drainage canal and pump station improvements in Orleans and Jefferson Parishes, and drainage improvements, flood protection and structure raising in St. Tammany Parish.</p>	Public Law 104-46 (Sec 108)
Water Resources Development Act, 1996		Public Law 104-303 (Sec 533)
Water Resources Development Act, 1999	<p>WEST BANK AND VICINITY, NEW ORLEANS, LA HURRICANE PROTECTION</p> <p>Combination of Projects - Section 328(b) of WRDA 99 states:</p> <p>The Secretary shall carry out work authorized as part of the Westwego to Harvey Canal project, the East of Harvey Canal project, and the Lake Cataouatche modifications as a single project, to be known as the "West Bank and Vicinity, New Orleans, Louisiana, Hurricane Protection", with a combined total cost of \$280,300,000.</p>	Public Law 106-53, Aug. 17, 1999

TABLE 11-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Water Resources Development Act, 1986	Westwego to Harvey Canal - Section 401(b) of WRDA 86 states: Structural and nonstructural measures to prevent flood damage to those areas identified in the Feb. 1984 draft Environmental Impact Statement for the West Bank Hurricane Protection Levee, Jefferson Parish, LA at a total cost of \$61,500,000, with an estimated first Federal cost of \$40,000,000 and as estimated first non-Federal Cost of \$21,500,000. Funds provided by non-Federal interest for interim hurricane protection may be considered beneficial expenditures and may be credited as part of the non-Federal contribution of the project pursuant to Section 104 of this Act.	Public Law 99-662, Nov 17, 1986
Water Resources Development Act, 1996	East of Harvey Canal - Section 101(a)(17) of WRDA96 states: The project for hurricane damage reduction, West Bank of the Mississippi River in the vicinity of New Orleans (East of Harvey Canal), Louisiana: Report of the Chief of Engineers, dated May 1, 1995, at a total cost of \$126,000,000, with an estimated Federal cost of 82,200,000 and an estimated non-Federal cost of \$43,800,000.	Public Law 104-303
Water Resources Development Act, 1996	Lake Cataouatche - Section 101(b)(11) of WRDA 96 states: The project for hurricane damage prevention and flood control, West Bank Hurricane Protection (Lake Cataouatche Area), Jefferson Parish, Louisiana, at a total cost of \$14,375,000 with an estimated Federal cost of \$9,344,000 and an estimated non-Federal cost of \$5,031,000.	Public Law 104-303
Coastal Wetlands Planning, Protection and Restoration Act	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT (See Section 19 of Text) Directed the Secretary of the Army to convene the Louisiana Coastal Wetlands Conservation and Restoration Task Force to initiate a process to identify and prepare a list of coastal wetlands restoration projects in Louisiana to provide for the the long-term conservation of such wetlands and dependent fish and wildlife populations in order of priority in creating, restoring, protecting, and enhancing coastal wetlands, taking into account the quality of such coastal wetlands, with due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration.	Public Law 101-64 Nov. 24, 1990 Section 301-306

1. Contains latest published map.
2. Permanent Appropriation Repeal Act.

TABLE 11-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report For	Cost To September 30, 2004		Mo. and Yr. Completed Deauthorized or Reclassified
			Construction	Operation and Maintenance	
Alteration of Berwick Bay Bridge ¹	--	1967	\$ --	\$ --	--
Amite River and Bayou Manchac, LA	Complete	1978	28,234	69,087	1928
Aquatic Plant Control Program, LA	Complete	1984	17,098,851	--	
Atchafalaya River Bayous Chene Boeuf, and Black, LA	Complete	1984	30,356,691	200,064,598	
Atchafalaya River, Morgan City to Gulf of Mexico, LA	Complete	1981	501,963	37,167,654	1914
Barataria Bay Waterway, LA	Complete	1984	1,572,685	32,865,680	Nov. 1963
Bayou Bonfouca, LA	Complete	1974	30,997	320,758	1931
Bayou Dorcheat, Loggy Bayou and Lake Bisteneau, LA ^{2,3,4,5}	--	1887	5,000	--	--
Bayou Dupre, LA	Complete	1968	38,915	104,187	1939
Bayou Lacombe, LA	Complete	1967	4,716	133,573	1938
Bayou Lafourche and Lafourche Jump Waterway, LA		1984	1,624,424	2,348,505	
Bayou La Lautre, St. Malo, and Yscalskey, LA	Complete	1970	96,916	223,616	May 1956
Bayou Plaquemine Brule, LA	Complete	1950	33,410	36,780	1915
Bayou Queue de Tortue, LA	Complete	1970	33,355	28,315	Mar. 1923
Bayou Segnette Waterway, LA	--	1958	238,828	997,352	--
Bayou Teche, LA		1984	754,330	19,882,242	
Bayou Teche & Vermilion River, LA	Complete	1983	2,891,822	2,815,462	Mar. 1957
Bayou Terrebonne, LA ^{3,7}	Complete	1961	120,089	251,691	1916
Bayou Vermilion, LA ³	Complete	1947	34,900	200,169	1896
Big Pigeon and Little Pigeon Bayous, LA	Complete	1936	--	37,169	²
Calcasieu River and Pass, LA	Complete	1984	27,830,835	245,665,381	Oct. 1968
Calcasieu River at Coon Island, LA ⁸	Complete	1976	1,015,814 ¹⁰	--	Apr. 1974
Calcasieu River at Devil's Elbow, LA	Complete	1981	5,856,200	--	Sep. 1978
Cascasieu River Salt Water Barrier, LA ⁹	Complete	1973	4,197,262	--	Jan. 1968
Cane River, LA ^{2,5}	--	1910	2,500	2,000	--
Chefuncte River and Bogue Falia, LA	Complete	1967	58,342	584,440	1959
Cypress Bayou and Waterway between Jefferson, TX, and Shreveport, LA ¹⁰	Complete	1971	202,817	452,611	Dec. 1914
Freshwater Bayou, LA	Complete	1984	7,116,224	47,486,465	Aug. 1968
Grand Bayou Pass, LA	Complete	1950	7,676	14,480 ¹⁰	1939
Gulf Intracoastal Waterway between Apalachee Bay, FL, & Mexican Border	Complete	1985	63,284,470	641,093,445	--
Houma Navigation Canal, LA		1984	--	45,287,254	
Inland Waterway from Franklin to Mermentau River, LA ^{1,11}	Complete	1960	249,052	552,780	²
Intracoastal Waterway from the Mississippi River to Bayou Teche, LA ¹²	--	1956	--	11,699	--
Lake Charles Deep Water Channel, LA ¹³	--	1950	--	241,896	--
Leland Bowman Lock, LA	Complete	1987	32,200,010	--	Mar. 1985
Little Caillou Bayou, LA	Complete	1973	77,761	751,485	1929
Mermentau River, Bayou Nezpique, and Bay Des Cannes, LA	Complete	1977	5,197,975 ¹⁴	114,519	--
Mermentau River, LA	Complete	1985	4,672,579	53,279,308	Jul. 1952
Mississippi River Baton Rouge to Gulf of Mexico, LA	--	1991	84,568,128 ¹⁶	1,236,833,078 ^{17,22}	--

TABLE 11-C OTHER AUTHORIZED NAVIGATION PROJECTS
(Continued)

Project	Status	For Last Full Report See Annual Report For	<u>Cost To September 30, 2004</u>		Mo. and Yr. Completed Deauthorized or Reclassified
			Construction	Operation and Maintenance	
Mississippi River-Gulf Outlet, Michoud Canal, LA	-- ²¹	1996	88,535,000 ²⁰	2,344,564,960	Jan. 1968 ²¹
Mississippi River Outlets, Venice, LA	Complete	1976	2,499,555	1,271,252	Nov. 1974
Navigation work under special authorization (Calcasieu Pass channel in Old River Bend at Cameron, LA) ¹⁵	Complete	1986	10,014,012	44,358,811	Complete
North Pass-Pass Manchac, LA	--	1957	--	139,755	--
Pass Manchac, LA	Complete	1996	533,492	--	May 1995
Petite Anse, Tigre, and Carlin Bayous, LA	Complete	1950	79,845	124,681	1912
Removal of Aquatic Growth, LA	Complete	1981	--	1,453,172	Nov. 1980
Sulphur River, AR and TX ^{2,5}	--	1984	--	50,839,236	--
Tangipahoa River, LA	--	1919	45,989	--	--
Tickfaw, Natalbany, Ponchatoula, and Blood Rivers, LA ³	--	1985	--	2,903,990	--
Waterway from White Lake to Pecan Island, LA ¹¹	Complete	1973	8,115	94,164	1921
Waterway from Empire, LA, to Gulf of Mexico	--	1948	10,904	742	--
Waterway from Intracoastal Waterway to Bayou Dulac, LA	Complete	1981	1,068,142	1,673,050	Jun. 1950
	Complete	1990	641,608	2,673,705	Aug. 1964

1. Transferred to Department of Transportation. Authorized under Truman-Hobbs Act.
2. Completed. Date will be furnished when available.
3. Includes previous project costs.
4. No commerce reported.
5. Abandonment recommended in H. Doc. 467, 69th Cong., 1st sess.
6. Completed except that portion above mile 10.3 providing for widening from 40 feet to 60 feet, which is inactive.
7. By Public Law 88-404, that portion of Bayou Terrebonne between point where Barrow Street crosses said stream and a line determined by prolonging and extending eastern right-of-way line of New Orleans Boulevard southerly to south bank of said stream was declared nonnavigable.
8. Includes \$66,000 contributed funds.
9. Operation and maintenance of the structure reported under project "Calcasieu River and Pass, LA."
10. Excludes \$50,000 contributed funds.
11. Not completed; incorporated in navigation project "Mermentau River, LA."
12. Not completed; superseded for most of it length by present 12- by 125-foot Gulf Intracoastal Waterway, which coincides with or parallels it.
13. Maintenance project; no future work schedules.
14. Includes \$57,555 (\$29,974 of which was from Public Works funds) for new work on previous project. Includes \$114,519 for maintenance of previous project.
15. Work is under continuing authority.
16. Includes \$1,729,989 for previous project.
17. Does not include allotment of \$40,000 (9613123).
18. Does not include expenditures of \$63,370 (9613123).
19. Includes \$169,055 for previous projects and \$3,379,676 from permanent indefinite appropriation.
20. Includes \$8,811,000 Non-Federal Costs.
21. Channel completed except for IHNC Lock replacement and foreshore protection.
22. Does not include expenditures of \$7,475,000 for Dredge Wheeler Ready Reserve for 2004.

TABLE 11-D **OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2003		Completed
		Operation and Construction	Mo. and Yr. Maintenance	
Amite River and Tributaries, LA	1964	3,034,255 ¹	--	Feb. 1964
Bayou Choupique, LA ²	1954	129,930	--	Mar. 1954
Bayou Rapides, LA ²	1952	95,179	--	Dec. 1951
Harvey Canal, Bayou Barataria Levee, LA	1979	1,018,005	--	--
Morgan City and Vicinity, LA	1992	1,975,628	--	--

1. In addition, the following was expended from contributed funds:
Amite River and tributaries \$ 430
Harvey Canal, Bayou Barataria Levee, LA 425,209
2. Authorized by Chief of Engineers (Sec. 205, 1948 Flood Control Act, as amended)

TABLE 11-E **DEAUTHORIZED PROJECTS**

Project	For Last Full Report See Annual Report for	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Baton Rouge Harbor Segment Between Mi 2.5 and 5.0	1946	Nov. 2, 1979 Section 12, Public Law 93-251 (WRDA 74)	--	--
Bayou Grosse Tete, LA	1969	May 6, 1981 DAEN-CWP-A Letter Subj: Completed Action on 5th Deauthorization Rpt, dated Jun. 17, 1981	--	--
Lake Borgne and Chef Menteur Bulkheads and Jetties	1942	Nov 1979	--	--
Vinton Waterway, LA	1950	Nov. 2, 1979 Section 12, Public Law 93-251 (WRDA of 1974)		

**TABLE 11-F FLOOD CONTROL WORK
UNDER SPECIAL AUTHORIZATION**

**Flood control activities pursuant to Section 205, P.L. 858
80th Congress, as amended (preauthorization)**

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Armenco Canal, Iberia Parish, LA	0	0	0
Bayou Choupique, LA	160,000	0	160,000
Bayou Pigeon Flood Protection, LA	0	0	0
Bayou Sorrel Flood Protection, LA	0	0	0
Bayou Terrebonne, LA	0	0	0
Crown Point Basin, LA	0	0	0
Henderson Bayou, LA	0	0	0
St. Martin Parish, LA	60,000	0	60,000
Town of Carencro	100,000	0	100,000
Goose Bayou Basin, LA	4,800	2,600	7,400
Jean Lafitte, LA	400,000	0	400,000
Lockport to Larose, LA	150,000	0	150,000
Paillet Basin, Jeff Parish, LA	50,000	0	50,000
Rosethorne Basin, LA	150,000	0	150,000
Section 205 Coordination	15,000	0	15,000
Oakville to Lareussite, LA	75,000	0	75,000
Braithwhite Park, LA	300,000	0	300,000
Total Section 205	\$1,460,000	\$2,600	\$1,462,600

**Emergency StreamBank & Shoreline Protection
(Section 14 of 1946 Flood Control Act, P.L. 526)
(Section 27 of the 1974 Water Resources Development Act)**

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Bayou Des Glaisses, LA	0	0	0
Highway 301 along Barataria Bay, LA	0	0	0
LA State Highway 75	5,000	0	5,000
Scotlandville Bluff, LA, Southern University	0	0	0
Highway 1185, Site #2, Avoyelles Parish	20,000	0	20,000
Highway 77, Bayou Plaquemine, LA	0	0	0
Bayou Folse Road	0	0	0
Parish Road 120 at Lake Arthur, LA	0	0	0
Section 14 Coordination	5,000	0	5,000
Total Section 14	\$30,000	0	\$30,000

**Clearing and Snagging For Flood Control
(Section 208, 1954 Flood Control, as amended)**

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Section 208 Coordination	0	0	0
Total Section 208	0	0	0

**Shoreline Protection of Publicly Owned Property
(Section 103 River and Harbor Act of 1962, PL 87-874, as amended)**

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Fort Livingston, Grand Terre	0	0	0
Section 103 Coordination	0	0	0
Highway 70, Lake Palourde	\$ 0	0	0
Total Section 103	\$0	0	0

TABLE 11-G

ENVIRONMENTAL WORK UNDER SPECIAL AUTHORIZATION

Wetland/Other Aquatic Habitat Creation (Section 204, Public Law 102-560)

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Atchafalaya River	0	0	0
Houma Navigation Canal, Barrier Island Restoration	0	0	0
CDSMAD, Sediment Trap for Marsh	0	0	0
MR-GO Mile 14-12	0	0	0
MR-GO South Jetty Wong Dike	0	0	0
Section 204 Coordination	15,000		15,000
Total Section 204	\$15,000	\$0	\$15,000

Aquatic Ecosystem Restoration (Section 206, Public Law 102-560)

Project	FISCAL YEAR COST		
	Federal	Non-Federal	Total
Buras Marine	50,000		50,000
City of Mandeville	1,100,000		1,100,000
False River	50,000		50,000
Lake Martin Ecosystem Restoration	25,000		25,000
LA State Pen, Lake Killarney	10,000		10,000
Lake Fausse Point	50,000		50,000
Lake Verret, Assumption Parish	0		0
Miller Lake Ecosystem Restoration	0		0
Vermilion River Ecosystem Restoration	0		0
Total Section 206	\$1,285,000		\$1,285,000

Project modifications to improve environment (Section 1135, Public Law 99-662)

Project	Fiscal Year Cost		
	Federal	Non-Federal	Total
Calcasieu River Hydrologic Restoration	0		0
Gulf Intercoastal Waterway, Plaquemines Lock, LA	1,200,000		1,200,000
New River Restoration	0		0
Houma Navigation Canal	25,000		25,000
GIWW Miles 220 to 222.5 W of Harvey Lock, LA	10,000		10,000
MRGO	0		0
Section 1135 Coordination	5,000		5,000
Total Section 1135	\$1,240,000		\$1,240,000

Navigation Section 107

Project	Fiscal Year Cost		
	Federal	Non-Federal	Total
Short Cut Canal	0	0	0
Cameron Oil Port	0	0	0
Port Fourchon Extension	25,000	0	25,000
Section 107 Coordination	5,000	0	5,000
Bayou DuLarge	0	16,600	16,600
Total	\$30,000	\$16,600	\$46,600

TABLE 11H

**ACTIVE GENERAL INVESTIGATIONS
(96×3121)**

Item and CWIS Number	Fiscal Year Cost		
	Federal	Non-Federal	Total
SURVEYS (Category 100)			
<u>Navigation (110)</u>			
Intracoastal Waterway Locks, LA	112,677		112,677
Atchafalaya River and Bayous			
Chene, Boeuf, and Black, LA	721,213	134,789	856,002
Calcasieu River Ship Channel Enlargement, Port of Iberia, LA	87,865		87,865
Calcasieu Lock, LA	86,306		86,306
Port of Iberia, LA	1,346,966	67,656	1,414,622
Subtotal	\$2,355,027	\$202,445	\$2,557,472
<u>Flood Damage Prevention Studies (120)</u>			
Calcasieu River Basin, LA	23,840		23,840
Amite River and Tributaries, Bayou Manchac, LA	131,242		131,242
Lafayette Parish, LA		171,059	171,059
West Shore, Lake Pontchartrain	0	10,781	10,781
Hurricane Protection, LA	102,724		102,724
Jefferson Parish, LA	38	24,792	24,830
Orleans Parish, LA		88,692	88,692
St. John the Baptist Parish, LA	1,124		1,124
St. Charles Parish Urban Flood Control, LA	24,829		24,829
Plaquemines Parish Urban Flood Control, LA	84,634	63,628	148,262
St. Bernard Parish Urban Flood Control, LA	84,114	86,588	170,702
Subtotal	\$452,545	\$445,540	\$898,085
<u>Ecosystem Restoration Studies (144)</u>			
LCA Ecosystem Restoration	3,317,678	506,638	3,824,316
Subtotal	\$3,317,678	\$506,638	\$3,824,316
<u>Special Studies (140)</u>			
West Baton Rouge Parish, LA	129,808		129,808
Subtotal	\$129,808		\$129,808
<u>Miscellaneous Activities (170)</u>			
Interagency Water Resources Development	16,869		16,869
Special Investigations	20,570		20,570
Gulf of Mexico Program	78,680		78,680
National Estuary Program	3,939		3,939
North American Waterfowl Management Plan	2,185		2,185
Subtotal	\$122,243		\$122,243

TABLE 11H
(Continued)

ACTIVE GENERAL INVESTIGATIONS
(96×3121)

Item and CWIS Number	Fiscal Year Cost		
	Federal	Non-Federal	Total
<u>Planning Assistance to States (180)</u>			
Alexandria GIS Mapping	164	122	286
St. Charles East Bank Recreation	462	924	1,386
City of Donaldsonville	495	30,388	30,883
Bayou Lafourche WS Investigation	159	79	238
Gretna Levee Top Plan	0	9,452	9,452
Camp Atchafalaya Master Plan	1,561	86	1,647
Eagle Point Advanced Planning	239	2,189	2,428
Ascension Parish H&H Modeling	0	3,447	3,447
City of East Baton Rouge/Parish	63,000	917	63,917
Jefferson Parish	0	32,771	32,771
Baton Rouge Park and Recreation	3,398	22,185	25,583
Iberia Parish Master Plan	500	20,650	21,150
Plaquemines Parish Master Plan	0	4,883	4,883
New Orleans Riverfront	49,255	2,558	51,813
Town of Henderson Master Plan	0	24,999	24,999
IT — Chitimacha Tribe River	194	194	388
IT — Chitimacha Tribe H&H	0	487	487
IT — Chitimacha Emergency Response	97	0	97
IT — Chitimacha Reservation Civil Plng	0	292	292
IT — Chitimacha Raintree Village	10,000	32,754	42,754
IT — Chitimacha Stormwater Planning	74,953	4,241	79,194
IT -- Tunica Master Planning	681	97	778
IT — Tunica Reservation Master Plan	45,374	61	45,435
Subtotal	\$250,532	\$193,776	\$444,308
TOTAL (Category 100)	\$6,627,833	\$1,348,399	\$7,976,232

TABLE 11H
(Continued)ACTIVE GENERAL INVESTIGATIONS
(96×3121)

Item and CWIS Number	Fiscal Year Cost		
	Federal	Non-Federal	Total
Collection and Study of Basic Data (Category 200)			
Digitized Records	2,598		2,598
GIS East Baton Rouge Parish, LA	364,831		364,831
Flood Plain Management Services	25,002		25,002
FPM-Quick Responses	4,574		4,574
NFPC	8,276		8,276
Technical Services, General	56,865		56,865
Subtotal	\$462,146		\$462,146
Total (Category 200)	\$462,146		\$462,146
Preconstruction Engineering and Design (Category 420)			
	<u>Navigation</u>		
Bayou Sorrel Lock	347,196		347,196
Subtotal	\$347,196		\$347,196
Total (Category 600)	\$347,196		\$347,196
GRAND TOTAL GENERAL INVESTIGATIONS	\$7,437,175	\$1,348,399	\$8,785,574

VICKSBURG, MS, DISTRICT

This district comprises western and central Mississippi, southern Arkansas, northern Louisiana, and a very small portion of southwestern Tennessee, embraced in drainage basins of eastern tributaries of Mississippi River south of Horn Lake Creek to and including Buffalo River; Pearl River Basin in Mississippi; independent tributaries of the Gulf of Mexico south of the Buffalo River Basin to the Mississippi-Louisiana state line; western tributaries of Missis-

issippi River between White and Atchafalaya Rivers including Arkansas River Basin below a point 3 miles upstream from Pine Bluff and Arkansas River below mile 36.1 near Pendleton, AR; Ouachita and Black Rivers in Arkansas and Louisiana; and Red River in Louisiana and Arkansas to the Texas-Arkansas state line. The Vicksburg District territory encompasses 68,000 square miles.

IMPROVEMENTS

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Navigation

1. OUACHITA AND BLACK RIVERS BELOW CAMDEN, AR

Location. Ouachita River rises in Polk County, AR, and flows southeasterly and southerly about 600 miles. Below its confluence with the Tensas and Little Rivers at Jonesville, LA, it is called Black River, which enters Red River 34.5 miles from the Mississippi River.

Previous projects. See page 683 of Annual Report for 1962 for details.

Existing project. See page 684 of Annual Report for 1962 for details of the old 6.5-foot navigation project. Modified project and project for Red River below Fulton, AR, provide for a channel 9 feet deep and 100 feet wide in Red River between Old River and mouth of Black River, and in Black and Ouachita Rivers from mouth of Black River to Camden, AR. Authorized features for the modified project include four new locks and dams, in-river construction dredging to achieve a 9-foot navigation channel depth, and channel realignment. All 4 locks and dams are complete and in operation and initial channel dredging is complete providing 9-foot navigation depth. Remaining work consists of realignment of 25 restricted bendway sites between river miles 195 at Sterlington, LA, and river mile 335 at Camden, AR, on the Ouachita River. With these improvements in place the river system will be navigable by a four-barge tow (two abreast) to Crossett, AR, river mile 237, and a two-barge tow (abreast) to Camden, AR. Mitigation features include the 65,000-acre Felsenthal National Wildlife Refuge in Arkansas, the 18,000-acre D'Arbonne National Wildlife Refuge in Louisiana, a series of recreation facilities along the waterway, and improvements to Catahoula Lake to preserve it for migratory waterfowl. Estimated total cost for the nine-foot navigation project is \$281,009,000 which includes \$263,000,000 Federal costs and \$18,009,000 non-Federal costs.

Local cooperation. Local interests are required to furnish the construction rights-of-way for the realignment work. Seven of the 25 sites are within the Felsenthal National Wildlife Refuge and are already owned by the Federal Government. However, there have been no indications that the land for the remaining 18 sites will be forthcoming because of strong opposition to the realignment work by local environmental groups. The six remaining recreation facilities are unscheduled at this time due to the lack of required cost sharing agreements.

Terminal facilities. Public loading docks are at Columbia, LA, and Camden and Crossett, AR. Privately owned docks and loading and unloading facilities are at Columbia, Monroe, and Sterlington, LA, and El Dorado, Calion, and Camden, AR. Two grain-handling facilities and a petroleum-loading facility are in the vicinity of Jonesville, LA, a grain-handling facility is in the vicinity of Acme, LA, and a petroleum-loading facility is in the vicinity of Smackover, AR.

Operations and results during fiscal year.

In FY 04, maintenance dredging was performed from Camden, AR, to the mouth of the Black River by the contract Dredge *Butcher* and Dredge *Tulsa*, 330,000 cubic yards of material were moved from the navigation channel.

Condition as of Sep. 30. The project is 92 percent complete and provides limited navigation as far north as Camden, AR. All four locks and dams associated with the project are complete and in operation. Design and construction of the remaining features are on hold pending a consensus between the states of Arkansas and Louisiana concerning the type of development desired or the additional studies needed to reach a decision.

2. RED RIVER EMERGENCY BANK PROTECTION

Location. In northwest Louisiana, southwest Arkansas, and northeast Texas, along the Red and Old Rivers between the Mississippi River and the head of the levee system above Index, AR.

Existing project. Provides for realigning the banks by means of cutoffs and training works and for stabilizing banks by means of revetments, dikes, and other methods as emergency conditions may require in advance of developing the design for the entire Red River Waterway project. Estimated cost for this work (October 2004) is \$133,071,000 Federal and \$2,182,000 non-Federal, including a cash contribution of \$7,000.

Local cooperation. Fully complied with. For details see pages 11-19 to 11-20, Annual Report FY 80.

Operations and results during fiscal year. Construction was completed on Pleasant Valley Revetment.

Condition as of Sep. 30. Construction was initiated in October 1972 and is 99 percent complete.

3. RED RIVER WATERWAY PROJECT

J. Bennett Johnston Waterway

Location. From east central to northwest Louisiana along the Red and Old Rivers between the Mississippi River and Shreveport, LA.

Existing project. Provides a navigation route from the Mississippi River at the junction with Old River via Old and Red River to Shreveport, LA, developing a channel approximately 236 miles long, 9 feet deep, and 200 feet wide. The development includes five locks and dams, realignment and contraction of the river as necessary to develop an efficient navigation channel. Facilities to provide recreation and fish and wildlife development are an integral part of the project. Estimated cost for new work (October 2004) is \$1,910,928 Federal and \$102,917,000 non-Federal. The Federal cost includes \$589,000 for aids to navigation by U.S. Coast Guard.

Local cooperation. For details see page 11-21, Annual Report FY 80.

The Red River Waterway Commission, governing body of the Red River Waterway District, executed an act of assurance for all project features in Louisiana on Feb. 26, 1969, supported by resolution dated Jan. 30, 1969. The assurances were accepted for and on behalf of the United States on Apr. 15, 1969. The Commission furnished amended assurances covering the provisions of Public Law 91-646 and Public Law 91-611 on May 23, 1973, for the portion of the project within Louisiana. These were accepted for and on behalf of the United States on Nov. 14, 1973. A Local Cooperation Agreement between the Department of the Army and the Red River Waterway Commission for the acquisition of mitigation lands in the vicinity of Loggy Bayou Wildlife Management Area was executed on Jun. 16, 1993, and a project cooperation agreement between the same agencies for the acquisition of mitigation lands in the vicinity of Bayou Bodcau was executed on July 17, 1996.

Terminal facilities. Local interests are to provide adequate terminal facilities along the waterway. The Corps entered into an agreement with the City of Alexandria, LA, whereby material excavated from the Philip Bayou Realignment could be used as fill for port construction at mile 109. Construction of the realignment and port fill is complete. Construction of the Shreveport—Bossier, Natchitoches Parish, and Red River Parish Ports is complete.

Operations and results during fiscal year. Several channel training works were completed in FY04 to refine the reliability and safety in the navigation channel. Socot realignment, Hammel/Carroll/Harmon Reinforcement, and Hog Lake repairs were completed. The Grand Ecore Visitor Center and recreation projects at Locks and Dams 3, 4, and 5 were completed. The Shreveport Visitor Center and Shell Pt./Nantachie Structure were initiated.

Maintenance dredging was performed along the waterway by the contract Dredge *Tulsa* during FY 04. 1,175,000 cubic yards of material were removed from the navigation channel.

Condition as of Sep. 30. Construction was initiated in July 1973, and project is 93 percent complete.

Feasibility phase studies were authorized by WRDA 96 to determine the feasibility of extending navigation on the Red River from the vicinity of Shreveport, LA, to the vicinity of Index, AR, or to any justifiable interim point were initiated in Mar 99. Feasibility studies are scheduled to be completed in Sep 05. The Arkansas Red River Commission is the non-Federal sponsor.

4. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Sec. 107, Public Law 87-645, as amended.

In FY 04, \$10,008 was expended on Section 107 Coordination Accounts; \$149,770 on Yazoo Diversion Canal, MS; \$26,242 on Natchez-Adams County Port, MS.

Flood Control

5. ALOHA-RIGOLETTE AREA, LA

Location. The project is located in north-central Louisiana between the towns of Winnfield and Pineville on the left descending bank of the Red River.

Authorized Project. The recommended plan consists of a three-barrel floodgate structure installed at the mouth of Bayou Darrow to reopen it to the Red River, 8.2 miles of clearing and snagging on Bayou Darrow from its mouth upstream to Bayou Rigolette, construction of a closure and low-flow structure on Bayou Rigolette just below its junction with Bayou Darrow, and realignment of Sam's Bayou and appropriate mitigation features.

Local Cooperation. The City of Colfax, LA, has agreed to cost share this project. The Project Cooperation Agreement was signed on Sept. 19, 1994.

Operations and Results During Fiscal Year. Construction is complete on the Bayou Darrow Structure. Construction on Item 3 is underway.

Condition as of Sep. 30. Construction underway on Item 2b, and Item 3.

6. MCKINNEY BAYOU, AR

Location. The project area is located in southwestern Arkansas in the vicinity of Texarkana, AR and TX. The McKinney Bayou area is a crescent-shaped watershed located adjacent to the Red River containing approximately 340 square miles.

Existing project. The authorized project consists of flow diversion to the Red River at the state line between Arkansas and Texas, flow diversion into the Red River at Buzzard Bluff, improvement of McKinney Bayou channel, and land acquisition for mitigation. The State Line Diversion, Buzzard Bluff Diversion, and channel improvement features have subsequently been reclassified to the inactive category due to a lack of local support or lack of economic justification. Alternative plans developed to reduce flooding consisted of various channel improvements on the lower 27.6 miles of McKinney Bayou. A clearing and snagging alternative with project first costs of \$3.2 million and a plan combining clearing and snagging with channel improvement with project first costs of \$4.9 million were found economically feasible. Shortly after initiation of reconnaissance studies, Headquarters, U.S. Army Corps of Engineers, in an effort to streamline the study process, approved proceeding directly from the reconnaissance phase to preconstruction engineering and design (PED), subject to reconnaissance study finding being substantially in accordance with the authorized McKinney Bayou project and with previous U.S. Army Corps of Engineers, New Orleans District, study findings. Under this arrangement, the cost-shared feasibility phase would be eliminated. Study findings substantiated this decision. As a result, it was recommended that the study effort progress into PED. The reconnaissance report was approved by the U.S. Army Corps, Mississippi Valley Division, on May 12, 1997. The plan recommended for implementation would be developed during PED.

The local cost-sharing sponsors, the Miller County Improvement and Drainage District and the McKinney Bayou Drainage District have indicated by letters dated Sep. 24, and Sep. 30, 1997, respectively, that they do

not have the financial resources to undertake project construction. Therefore, they do not wish to continue into the next project development phase, PED. The project is being held in abeyance pending further developments regarding the local sponsor's ability to cost-share. If this cost-sharing issue cannot be resolved, all activities associated with the project will be terminated and it will be classified as inactive.

Condition as of Sep. 30. A new start reconnaissance study was initiated in January 1996. This restudy of the authorized project to address the feasibility of channel improvements on McKinney Bayou to reduce flooding of agricultural and other properties was completed in March 1997. Project is approved to proceed directly into preconstruction engineering and design pending execution of a PED cost sharing agreement.

7. OUACHITA RIVER LEVEES, LA

Location. East bank of Ouachita River between Bastrop, LA, and Sandy Bayou. Loop levees on the west bank at West Monroe, Columbia, and Bawcomville.

Existing project. There are 105.8 miles of levee on the east bank and 11.6 miles of levee in the three loops on the west bank. A Summary Report authorized gravel surfacing 117.4 miles of levee, and enlarging 36.6 miles of levee. Estimated Federal cost is \$30,417,000. Estimated non-Federal cost is \$5,404,000.

Local cooperation. Requirements and assurances of local cooperation are fully described on page 12-6 of FY 80 Annual Report. A supplemental agreement for the Bawcomville segment was executed in FY 90.

The 1991 Water and Energy Appropriations Act gave the Federal government responsibility for the repair and/or replacement of the deteriorated drainage structures. The Assurances Agreement for Local Cooperation was supplemented to reflect this change in responsibility. The supplemental agreement covered work performed since Fiscal Year 1992.

Condition as of Sep. 30. Item 1 of the Monroe to Sandy Bayou Levee enlargement project was completed Jul. 7, 1978. Additional work was deferred pending results of a comprehensive study of the entire Ouachita River Levee System. A summary report indicating that it is economically feasible to raise portions of the existing levee to authorized grade and that complete rehabilitation of the levee system as necessary was approved by MVD on Oct. 1, 1986. The study results were disseminated to the project sponsor and interested parties in October 1986. The Project was reclassified as

an active project on May 7, 1987. The final summary report was sent to the Office of the Chief of Engineers in July 1988 and design was initiated on the Bawcomville segment of the Ouachita River levees. A construction contract for the Bawcomville levee enlargement is complete. All of the deteriorated culverts have been replaced and/or rehabilitated. A contract to repair the last structure was awarded in FY 02. Item 1 of the Bastrop to Monroe Levee enlargement was completed in October 2001. Item 2 was awarded on 2 December 2003.

8. OUACHITA RIVER AND TRIBUTARIES, AR AND LA

Location. Improvements comprising comprehensive projects are on main stem Ouachita River, AR and LA, on its tributaries, Caddo and Little Missouri Rivers, and in Pine Bluff, AR. Description of Ouachita River Basin is presented in greater detail on page 690 of Annual Report for 1962.

Existing project. The authorized general plan for flood control and other purposes in the Ouachita River Basin includes the projects listed in Table 12-E. The 1966 Flood Control Act modified the Bayou Bartholomew and Tributaries, AR and LA, project to include 10 water-retention lakes in the western tributaries of Bayou Bartholomew in Arkansas and 6 local levee units along the main stem of the bayou in Louisiana.

Local cooperation. Fully complied with for completed features of comprehensive project. (See individual statements for further details.)

Operations and results during fiscal year. Operations for Blakely Mt. Dam-Lake Ouachita, DeGray Lake, Narrows Dam-Lake Greeson, Bayou Bartholomew and Tributaries, and Ouachita River Levees are shown in individual reports in 1985.

Condition as of Sep. 30. Pertinent data on those features which are complete or not started are in Table 12-E. Conditions of Blakely Mt. Dam-Lake Ouachita, DeGray Lake, and Narrows Dam-Lake Greeson are given in the individual reports in 1985 report.

Reconnaissance studies of flooding problems in Ouachita Parish, LA, were initiated in January 1994. Study efforts are concentrating on the developing urban area around Monroe, LA. The reconnaissance report, completed in January 1995, recommended a feasibility study be conducted on flood reduction for the River Styx Bayou area under authority of Section 205 of the Flood Control Act of 1948, as amended. The study

addressed alternative sized pumping stations. The final Detailed Project Report was completed in November 1995. The construction contract is complete.

9. PEARL RIVER BASIN, MS AND LA

Location. The basin comprises most of the South-central portion of Mississippi and a small part of southeast Louisiana. The Pearl River begins in Neshoba County, MS, and flows southwesterly 113 miles to the vicinity of Jackson, MS, then southeasterly 233 miles to the vicinity of Bogalusa, LA. At that point, the Pearl River splits into the East and West Pearl Rivers, and flows southerly 44 and 48 miles, respectively, before entering the Rigolets and Lake Borgne.

Existing projects. The Jackson-East Jackson Flood Control Project provides for improvements of the Pearl River at Jackson, MS. This project includes two levee systems totaling 13.2 miles in length, with two pumping stations, four gated outlets, and 18.9 miles of channel rectification including three cutoffs with a total length of 2.2 miles in the Pearl River. This project was authorized by the Flood Control Act of Jul. 14, 1960. Construction began in July 1964 and work was completed in FY 68. Total Federal cost of the project was \$7,190,200. The FY 83 Jobs Bill authorized extension of the Jackson-East Jackson West Bank levee system along the Fortification Street I-55 exit. This extension was initiated and completed in FY 84.

Public Law 98-63, dated Jul. 29, 1983, authorized the vicinity of Jackson project. This authority provided for additional measures to prevent recurring flood damages along the Pearl River at Jackson and included 3.3 miles of floodway clearing and enlarging the opening at the Highway 25 Bridge. This work has been completed. Mitigation lands for the clearing were purchased by the local sponsor in May 1985 and the Corps has reimbursed the local sponsor to cover the cost of these lands. Total Federal cost of this project is \$1,800,000.

Authorized projects. Public Law 99-88, dated Aug. 15, 1985, authorized planning, design, engineering, and construction of a levee system in Slidell, LA, to protect 3,265 residential and commercial structures from floods in the West Pearl. Public Law 99-662, dated Nov. 17, 1986, authorized construction of Shoccoe Dam and various flood control measures for Carthage-Leake County, MS.

Local cooperation. Requirements are described in full on page 12-6 of the FY 92 report.

Condition as of Sep. 30. An overall basin study is essentially complete, except for alternative studies to Shoccoe Dry Dam as discussed below. Flood control feasibility studies for Slidell, LA, recommending a 15-mile levee system, and for Jackson, MS, recommending Shoccoe Dam have been completed. Detailed engineering and design studies for the Slidell levees have been terminated due to the lack of a local sponsor. As a result of upstream opposition, Shoccoe Dam is not implementable. In response to a request by the local sponsor, the Pearl River Basin Development District, reconnaissance studies to evaluate alternatives to Shoccoe for flood damage reduction in the Jackson Metropolitan Area have been completed and a potentially feasible levee plan identified. A Feasibility Cost Sharing Agreement was signed with the Local Sponsor on Sep. 25, 1991. The feasibility studies focused on a comprehensive levee system and other flood control measures across the basin to reduce damages associated with flooding from the Pearl River. The Feasibility Study was suspended in July 1998 due to the lack of a cost sharing sponsor. Feasibility studies to investigate other alternatives to include a lakes plan extending downstream of Ross Barnett Reservoir through the Jackson Metropolitan area are ongoing. The feasibility cost sharing agreement necessary to resume feasibility studies with the Rankin-Hinds Pearl River Flood and Drainage Control District was signed in Oct. 2003. This study is currently scheduled to be completed in Sep. 2006. Studies of various flood control measures for Carthage-Leake County, Columbia and Picayune, MS; Bogalusa, LA, and the Bogue Chitto Subbasin have been completed. None were found economically feasible. Navigation studies have been conducted on the East and West Pearl Rivers. Results of these studies indicate that maintenance necessary to reopen the existing West Pearl River navigation project is economically justified. The final EIS was filed with EPA in March 1994. Studies indicate that the West Pearl River Navigation Project is economically justified, engineeringly feasible, and in the overall public interest. Maintenance dredging was to resume in the spring of 1995; however, environmental litigation seeking declaratory and injunctive relief was filed and the Corps was enjoined to dredge any portion of the project. Also in 1995, the Corps officially placed the project in a caretaker status by directing that limited funds for the project be used for maintenance of the project in caretaker status. Investigation directed toward project deauthorization were initiated in FY 03.

10. PEARL RIVER, SLIDELL, ST. TAMMANY PARISH, LA

Location. The project is located in the southeastern portion of the State of Louisiana and consists of the

area bounded by the West Pearl River on the east, Interstate 10 on the west, and Lake Pontchartrain on the south.

Authorized project. The project is broken into two segments of levees. The segment north of I-10 will consist of 4.0 miles of levee, a pumping station, a floodgate structure, and minor drainage structures. This levee will protect the Slidell area north of I-10 from flooding associated with a 200-year hydrological event on the Pearl River. The segment south of I-10 will consist of 9.0 miles of levees, three pumping stations, floodgates, and minor drainage structures. This levee will protect the Slidell area south of I-10 from flooding associated with a 200-year hydrological event on the Pearl River and provides the same level of protection against hurricane surges. These two levee segments total 13 miles of levee and would protect some 3,029 homes. Estimated Federal cost is \$28,437,000. Estimated non-Federal cost is \$9,479,000.

Local cooperation. The project sponsor, St. Tammany Levee Board, and the Assistant Secretary of the Army (Civil Works), in an agreement consistent with the Fiscal Year 1985 Supplemental Appropriation Act Public Law 99-88) and Senate Report 1567, signed the Local Cooperation Agreement Jun. 30, 1986. The 1997 Louisiana Regular Legislative Session abolished the St. Tammany Levee District.

Operations and results during fiscal year. This project has been terminated due to the abolishment of the project sponsor.

Condition as of Sep. 30. Completed resolution of comments on the General Design Memorandum for north levee only. Preparation of plans and specifications has been terminated. No construction has taken place.

11. RED RIVER BELOW DENISON DAM (VICKSBURG DISTRICT)

Location. On Red River and its tributaries below Denison Dam, in Oklahoma, Arkansas, Texas, and Louisiana. (Refer to Geological Survey State maps and folio "Maps of Red River" - 1958 edition.)

Existing project. Flood Control Act of 1946 approved general plan for flood control on Red River below Denison Dam, TX and OK, which provides for construction of six flood control reservoirs in combination with existing or authorized Federal and non-Federal levee improvements, modified as required, and channel stabilization at locations where levee setbacks are impossible or uneconomical. This act further authorized incorporation of several separate existing

projects for flood damage prevention along Red River below Denison, above jurisdiction of the MRC, into this project. By Public Law 780, 83rd Cong., 2nd sess., as amended by Public Law 218, 84th Cong., 1st sess., and Public Law 645, 86th Cong., 1st sess., plan of improvement was amended to include additional projects as indicated in following lists of reservoirs and local protection works considered in general flood control plan for the Red River below Denison Dam, and existing flood control projects incorporated into project in Vicksburg District. (See Table 12-F for new projects and Table 12-G for incorporated projects.)

Local cooperation. See individual reports herein.

12. RED RIVER BELOW DENISON DAM, LEVEES AND BANK STABILIZATION (VICKSBURG DISTRICT)

Location. Along the main stem of the Red River from the head of the levee system immediately above Index, AR, through the southwest corner of Arkansas to the vicinity of Boyce, LA, on the right bank, and Pineville, LA, on the left bank.

Existing project. Raising and strengthening existing and authorized Red River levees to provide protection against flooding and bank protection works at locations where levee setbacks are impossible or uneconomical. The plan consists of raising and strengthening existing and authorized Red River levees to provide against a flood approximately 20 percent greater than the flood of 1945, the flood of record, as modified by authorized reservoirs. Bank protection works are to be constructed at locations where levee setbacks are impossible or uneconomical. Estimated cost for new work (October 2004) is \$83,158,000 Federal and \$3,241,000 non-Federal.

Local cooperation. Requirements of local cooperation are fully described on page 12-10 of FY 1984 Annual Report.

Operations and results during fiscal year.

Condition as of Sep. 30. Completed Levee Item 5 and Dillard Revetment. Construction was initiated in February 1948 and the levee and bank stabilization are complete with the exception of levee rehabilitation within the state of Arkansas. Scheduled to initiate gravel surfacing on Louisiana levees.

13. WEST AGURS, LA, LEVEE

Location. The West Agurs, LA, Levee is located in Caddo Parish in northwestern Louisiana, immediately adjacent to the northern corporate limits of Shreveport.

Existing Project. The West Agurs levee was constructed by local interests in 1961 and incorporated into the Federal project Red River Below Denison Dam Project in 1983. The levee extends from U.S. Highway 71 at the north end of the area to the Texas and Pacific Railroad at the lower end, a distance of approximately 3 miles. In addition to the levee, appurtenant interior drainage works include a borrow pit channel at an approximate bottom elevation of 150.0 feet NGVD, a 55 CFS pumping station, and one 10- by 10-foot floodgate. The entire system was designed to protect the 700-acre West Agur area from Twelve Mile Bayou headwater and Red River backwater flooding. Total Federal cost is \$0.

Local Cooperation. The Caddo Levee District completed levee improvements consisting of a temporary ponding area required for the levees to be incorporated into the Federal project in 1983. The West Agur levee was incorporated into the Federal system in 1983. Operation and maintenance of the levee is the responsibility of the Caddo Levee District.

Condition as of Sep 30. Studies of flooding problems in the West Agur area conducted under the authority of Section 205 of the 1948 Flood Control Act as amended were completed in March 1999. The report completed in December 1998 recommends an additional 55 cfs pump to provide flood protection to commercial and industrial properties located within the leveed area. Construction was initiated in FY 03 and was completed in FY 04.

14. TENSAS RIVER BASIN, LOUISIANA

Location. The Tensas River Basin is bounded by the Mississippi River on the east and the Ouachita-Black Rivers on the west, and extends southward from the Louisiana/Arkansas state line to Old River control Structure in Concordia Parish, Louisiana. Parts or all of Catahoula, Concordia, East Carroll, West Carroll, Ouachita, Franklin, Madison, Morehouse and Tensas Parishes lie in the basin. It encompasses approximately 3.3 million acres with over 50 lakes and streams, 4 national wildlife refuges, 11 wildlife management areas, 1 state wildlife refuge, 1 game and fish preserve, 2 state parks, 2 ports, and a historical site at Poverty Point. Four pumping plants, numerous weirs, and drainage structures are also located in the area.

Existing Project. Flooding, water supply, and the decline of environmental resources are problems in the basin. In particular, this ecosystem is being rapidly degraded from pollution of water, sedimentation, and frequent and excessive flooding. Possible solutions to the problems include channel improvements, drainage structure(s), and weir(s).

A comprehensive study is required to balance these competing demands and is critical for this area to ensure the wise and efficient use of the basin's water resources. The study scope is more in accord with that requiring a comprehensive watershed approach to these problems, based on the size and complexity of the area (5,141 square miles with very sensitive environmental resources and complex hydrologic conditions), the need for multi-agency coordination, and the potential for multiple sponsors due to the potentially large project implementation cost.

Conditions as of Sep. 30. The 905(b) report was completed in December 2003 and approved in January 2004. In order to adequately investigate the basin and provide the local sponsor with enough information for their decision to participate in a Feasibility Cost-Sharing Agreement, the total study cost estimate is \$550,000.

15. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Inspection of completed work was accomplished at a cost of \$364,771 for the fiscal year. Total cost as of Sep. 30, 2004, is \$6,735,777.

16. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Emergency flood control activities—repair, flood fighting, and rescue work. (Public Law 99, 84th Cong., and antecedent legislation.)

FY 04 costs for the period were \$514,700 for disaster preparedness.

Snagging and clearing of navigable streams and tributaries in the interest of flood control (Sec. 208 of 1954 Flood Control Act, Public Law 780, 83rd Cong.)

In FY 04, \$10,001 was expended on Section 208 coordination account.

Emergency bank protection (Sec. 14 of 1956 Flood Control Act, Public Law 780, 83rd Cong.)

In FY 04, \$15,024 was expended on Section 14 coordination account; \$16,999 on Fort Lookout, Ouachita River, AR; \$6,997 on Parker Bayou, Pearl River County, MS; \$21,731 on Eubanks Creek, Jackson, MS; \$3,400 on Port Bienville Industrial Park Drainage Ditch; \$540,748 on Dillon's Bridge, Bogue Chitto River, MS; \$41,672 on Highway 495, Natchitoches, LA; \$80,537 on Bayou Macon, Poverty Point, LA; \$28,145 on Mississippi River, Little Mexico, Natchez, MS; \$22,689 on Tallahatchie River, Site 3, Tallahatchie County, MS; \$19,547 on Tallahatchie River, Site 4, Tallahatchie County, MS; and \$54,362 on Minnehaha Creek, Magnolia, MS.

Flood control activities pursuant to Sec. 205, Public Law 858, 80th Cong., as amended (preauthorization).

In FY 04, \$14,995 was expended on Section 205 coordination account; \$168,595 on Red Chute Bayou levee, LA; \$3,011 on Two Bayou, Camden, AR; \$21,325 on Twelve Mile Bayou, LA; \$62,513 on King's Point Island, MS; \$10,204 on Tchula Lake, Tchula, MS; \$22,750 on Moorhead Bayou, Sunflower County, Moorhead, MS; \$71,037 on McKinney Bayou, Tunica County, MS; \$29,999 on Patterson Bayou, Blue Cane, Tallahatchie County, MS; \$49,992 on Hobolochitto Creek, Picayune, MS; and \$43,937 on Mill Street, Chapman Creek, Morton, MS. During FY03, \$2,793,987 was expended on permit evaluations; \$174,226 on enforcement; \$4,414 on appeals. A total of \$2,972,627 was expended in FY 03. \$62,572 was expended on Kings Point, MS.

17. ECOSYSTEM RESTORATION WORK UNDER SPECIAL AUTHORIZATION

Project modifications for improvement of environment pursuant to Sec. 1135, Public Law 99-662, as amended (preauthorization).

In FY 04, \$7,011 was expended on Section 1135 coordination account; \$31,013 on Sulphur River, LA; \$3,710 on Rammel Dam, AR; \$146 on Frazier/Whitehorse Oxbow, LA; \$3,045 on Lake Whittington, MS; \$3,353 on Bayou Macon, LA; \$65,870 on Dump Lake, Yazoo County, MS; \$10,057 on Boeuf River, Point Jefferson, LA; \$34,032 on Steep Bank Creek, AR; \$42 on Tchula Lake, MS; \$86 on Cannon Brake/Lower Vallier, AR; \$64 on Sunflower River, MS Delta Section, MS; \$16,005 on Lower Deer Creek, MS Delta Section, MS; and \$35,664 on Upper Deer Creek, MS Delta Section, MS.

**Aquatic Restoration pursuant to Section 206,
P.L. 104-303.**

In FY 04, \$10,003 was expended on Section 206 coordination account; and \$57,067 on Indian Bayou, Indianola, MS.

**18. CATASTROPHIC DISASTER
PREPAREDNESS PROGRAM**

During FY 04, \$15,000 was expended on continuity of Government, and \$0.00 on EOC Support and Facilities. Total costs for FY 04 were \$15,000.

19. GENERAL REGULATORY PROGRAM

During FY 04, \$2,445,319.10 was expended on Permit Evaluation; \$147,005.75 on Enforcement; \$165,639.67 on Compliance-Authorized Activities & Mitigation; and \$0 on appeals. A total of \$2,757,964.52 was expended in FY 04.

TABLE 12-A COST AND FINANCIAL STATEMENT

See Section in Text	Project	Funding	FY 00	FY 01	FY 02	FY 03	FY 04	Total Funds to Sep. 30, 2004
	Ouachita and Black Rivers below Camden, AR (6.5-foot naviga- tion project)	New Work Approp.\$ Cost	-- --					\$9,506,792 9,506,792
1.	Ouachita and Black Rivers below Camden, AR (9-foot navigation project)	New Work Approp. Cost	-- 42,650	-- 66,715				230,759,251 ² 230,223,172 ²
		Maint. Approp. Cost	8,637,285 8,638,451	6,467,033 6,488,189				161,844,421 161,630,608
2.	Red River Emergency Bank Protection	New Work Approp. Cost	7,355,000 7,830,942	4,766,900 4,907,647	1,369,000 1,392,000	5,655,541 5,662,449	326,000 307,000	84,973,441 86,087,449
	(Contrib. Funds)	New Work Contrib. Cost	-- --	-- --				6,825 6,825
3.	Red River Waterway Mississippi River to Shreveport, LA	New Work Approp. Cost	17,494,000 18,418,154	17,520,000 18,000,234	20,123,000 20,232,000	17,255,202 17,577,824	11,105,000 10,632,000	1,781,185,200 1,760,380,824
		Maint. Approp. Cost	13,820,867 13,808,395	13,987,686 13,328,794			11,019,357 10,819,268	128,743,101 126,787,862
	(Contrib. Funds)	New Work Contrib. Cost	-- --	-- --				4,916,659 4,879,967
5.	Aloha- Rigolette, LA	New Work Approp Cost	748,000 823,559	-- 38,007	200,000 235,000	237,000 261,107	564,000 565,000	10,059,800 9,741,313
6.	Contrib. Funds	New Work Approp. Cost	250,000 397,923	150,200 6,022		48,377		938,200 1,036,498
	(Contrib. Funds)	New Work Approp. Cost						-- 32,553

TABLE 12-A **COST AND FINANCIAL STATEMENT**
(Continued)

See Section in Text	Project	Funding	FY 00	FY 01	FY 02	FY 03	FY 04	Total Funds to Sep. 30, 2004
7.	Ouachita River Levees, LA	New Work						
		Approp.	300,000	-43,000	405,000	53,000		26,696,000
		Cost	1,370,435	86,337	365,937	97,289	1,825,791	26,474,286
9.	Pearl River Vicinity of Jackson, MS	New Work						
		Approp.	--	--	80,000	39,070		2,199,000
		Cost	--	--	78,905.04	40,016		2,198,920
	Pearl River Walkiah Bluff	New Work						
		Approp.	1,000,000	1,144,000	100,000	15,000		7,619,000
		Cost	1,963,685	1,109,135	11,668	23,310		7,618,656
		Maint.						
		Approp.	--	--				2,760,900
		Cost	--	--				2,667,808
	(Contrib. Funds)	New Work						
		Approp.	220,000	--				2,050,054
		Cost	636,852	--				2,020,788
10.	Pearl River, Slidell, St. Tammany Parish, LA	New Work						
		Approp.	--	--				3,586,000
		Cost	--	--				3,682,404
11.	Red River below Denison Dam Levees and Bank Sta- bilization (Vicksburg District)	New Work						
		Approp.	--	100,000	3,609,200	2,742,073	1,520,000	4,271,073
		Cost	809,399	385,808	3,662,000	2,738,251	1,360,000	4,218,160
	Natchez Bluff	New Work						
		Approp.	1,962,000	300,000	138,000	59,300	2,000	19,171,300
		Cost	4,260,032	3,255,301	360,000	159,631	100,000	12,322,377
		(Contrib. Funds)						
		Approp.	939,200	1,455,300	--			3,735,500
		Cost	1,191,494	1,358,551	823,547			4,462,057

1. Includes \$674,068 for new work on previous projects.
2. Includes \$3,312,000 PL 98-8 Jobs Bill. Excludes \$47,854,000 previously allocated to New Orleans District.
3. Excludes New Orleans District allocation and cost.

TABLE 12-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
May 17, 1950	OUACHITA AND BLACK RIVERS BELOW CAMDEN, AR (See Section 1 of Text) Modification of existing project to provide for 9-foot channel and deepening canal to Felsenthal, AR.	S. Doc. 117, 81st Cong., 1st sess.
Jul. 14, 1960	Modification of 9-foot project to provide four new locks and dams and channel improvements.	S. Doc. 112, 86th Cong., 2d sess.
Dec. 31, 1970	Migratory waterfowl refuges on Bayou D'Arbonne in connection with the pool of the Columbia Lock and Dam and in the pool of the Felsenthal Lock and Dam.	Report of the Chief of Engineers dated Nov. 25, 1970, and H. Doc. 92-109, 92d Cong., 1st sess.
Aug. 13, 1968	RED RIVER EMERGENCY BANK PROTECTION (See Section 2 of Text). Realining the banks by dredging cut-offs and training works and stabilizing banks by means of revetments and dikes.	H. Doc. 304, 90th Cong., 2d sess.
Aug. 13, 1968	RED RIVER WATERWAY-MISSISSIPPI RIVER TO SHREVEPORT, LA (See Section 3 of Text) Develop a 9 by 200 feet, approximately 236 miles long from Mississippi River at junction of Old River via Old River and Red River to Shreveport, LA, consisting of realinement, bank stabilization, and construction five locks and dams.	H. Doc. 304, 90th Cong., 2d sess.
Aug. 18, 1941	ALOHA-RIGOLETTE AREA, LA (See Section 5 of Text) Original author incorporated into RRBW Protection FCA 1946 project modified to provide Bayou Darrow outlet.	Public Law 101- 101 Cong., 2nd sess.
Oct. 27, 1965	BAYOU BODCAU AND TRIBUTARIES, AR AND LA Extend Cypress Bayou-Red Chute Bayou levee, construct stream closure landside drainage channel and three culverts on Red Chute Bayou and clearing and snagging channel; extend Flat River-Loggy Bayou levee, close Flat River near junction with Cutoff Bayou, and construct control structures on Flat River near junction with Red Chute Bayou; and enlarge Flat River channel to 20 to 35 feet, a distance of 11.6 miles.	H. Doc. 203, 89th Cong., 1st sess.
Jun. 30, 1948	CANAL 43, AR Channel enlargement	Sec. 205 of the Flood Control Act of 1948, as amended Authorized by Chief of Engineers, October 31, 1988.
Nov. 17, 1986	CANEY CREEK, MS Authorizes construction of such bank stabilization measures for Caney Creek in the vicinity of Jackson, MS, between McDowell Road and Raymond Road as the Secretary determines necessary for flood damage prevention and erosion control along approximately 3,000 feet of the creek.	Public Law 99-662, 99th Cong., 2d sess.

TABLE 12-B
(Continued) **AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Water Resources Development Act of 1996	NATCHEZ BLUFFS, MS Authorizes bluff stabilization in accordance with the Natchez Bluff study at a total cost of \$17,200,000, estimated federal cost of \$12,900,000 and non federal cost of \$4,300,000.	Public Law 104-303
Jun. 30, 1948 as amended	CHAUVIN BAYOU, LA Construction of a 250-cfs pumping plant located adjacent to Chauvin Bayou at the Ouachita River levee and a water control structure in Canal L-11.	Sec. 205 of the Flood Control Act of 1948, as amended. Authorized by the Chief of Engineers Feb. 6, 1990.
Jun. 30, 1948, as amended	LEAD BAYOU, MS Channel enlargement.	Sec. 205 of the Flood Control Act of 1948, as amended. Authorized by Chief of Engineers Jun. 10, 1980.
Jul. 29, 1983	MCKINNEY BAYOU, AR AND TX (See Section 6 of text) Authorizes a comprehensive study and recommendations for development and efficient utilization of water and related resources for the McKinney Bayou area, a tributary of Red Water.	Public Law 98-63 98th Cong., 1st sess.
Nov. 17, 1986	MONROE AND WEST MONROE, LA, AND OUACHITA PARISH, LA Authorizes such structural and nonstructural measures as the Secretary deems feasible to prevent flood damage to the cities of Monroe and West Monroe, LA, and Ouachita Parish, LA.	Public Law 99-662, 99th Cong., 2d sess.
May 17, 1950	OUACHITA RIVER AND TRIBUTARIES, AR AND LA (See Section 8 of Text) Authorized DeGray Lake; Murfreesboro Lake; extension of floodwall at Monroe to partially close the existing gap; local protection at Bawcomville, LA (subsequently constructed under Sec. 6, Act of May 15, 1928, with local interests contributing one third of cost); Bayou Bartholomew channel improvement, including Deep Bayou and Overflow Creek; Pine Bluff local protection; local protection at Calion, AR; and incorporation, into the Ouachita River and Tributaries project, of all existing projects and portions thereof in the basin above the lower end of the levees on the east bank of the Ouachita River. In addition, the Chief of Engineers authorized on Nov. 14, 1966, additional work on the levees.	S. Doc. 117, 81st Cong., 1st sess.

12-14

TABLE 12-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Water Resources Development Act of 1996	WRDA 96 modified the project to include dredging of the entrance to the Oxbow Lakes designated for preservation in project documentation and stated that the cost sharing for this dredging should be the same as the general navigation features.	Section 301, Public Law 104-303
Water Resources Development Act of 2000	WRDA 2000 modified the mitigation project to authorize the acquisition of lands in any of the parishes that comprise the Red River Waterway District, consisting of Auoyelles, Bossier, Caddo, Grant, Natchitoches, Rapides, and Red River Parishes.	
	RED RIVER BELOW DENISON DAM LEVEES AND BANK STABILIZATION (VICKSBURG DIST.) (See Section 12 of Text)	
Jul. 24, 1946	Levee and bank stabilization.	H. Doc. 602, 79th Cong., 2d sess.
Aug. 13, 1968	Deauthorization of Morringsport Dam and Reservoir on Cypress Creek; realining and stabilizing the banks of the Red River; and recreational facilities from the Mississippi River to Denison Dam, OK and TX.	H. Doc. 304, 90th Cong., 2d sess.
	RED RIVER WATERWAY-SHREVEPORT, LA, TO INDEX, AR	
Aug. 13, 1968	Provides for realinement of the channels of the Red River from Shreveport, LA, to Index, AR.	H. Doc. 304, 90th Cong., 2d sess.

TABLE 12-C

**OUACHITA AND BLACK RIVERS, AR AND LA
(9-FOOT PROJECT), LOCKS AND DAMS
(See Section 1 of Text)**

Location	Miles from Nearest Town	Miles Above Mouth of Black River	Width of Lock Chamber (feet)	Greatest Available Length for Full Width of Lock Chamber (feet)	Max. Lift at Low Water (feet)	Elev. Normal Pool Surface (feet msl)	Min. Depth on Lower Miter Still at Normal Pool Level (feet)	Character or Foundation	Kind of Dam	Type of Construction	Per- cent Com- plete	Total Estimated Project Cost
Jonesville, LA	10	25	84	600	30	34	14	Piling	Moving	Tainter gated dam; basculer gated navigation pass; steel mitring lock gates	100 ²	\$ 43,585,000
Columbia, LA	5	117	84	600	18	52	13	do	do	Tainter gated dam; fixedcrest navigation pass; steel mitring lock gates	95 ²	46,235,000
Felsenthal, AR	1	227	84	600	18	70 ¹	13	Earth	do	Tainter gated dam; hinged crest gated navigation pass; steel mitring lock gates.	88 ²	102,161,000
Calion, AR (H. K. Thatcher)	7	283	84	600	12	77	13	do	do	Tainter gated dam; hinged crest gated navigation pass; steel mitring lock gates.	88 ²	71,019,000
Estimated Federal Cost												\$263,000,000
Estimated Non-Federal Cost												18,009,000
Total Estimated Cost												281,009,000

1. Fish and wildlife impoundment level. Navigation pool elevation 65.

2. The percent complete reflects all work within the pool.

TABLE 12-D OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
			Construction	Operation and Maintenance	
Bayou Bartholomew, LA and AR ^{1,2,3,4}	--	1931	\$ 45,874	\$ 42,857	1
Bayous D'Arbonne and Corney, LA ^{1,2,4}	--	1941	19,000	37,804	1
Big Black River, MS ^{1,4,5}	--	1895	15,000	--	1
Big Sunflower River, MS ^{1,4,6,7}	--	1942	560,027	2,138,075	1
Boeuf River, LA ^{1,3,4,7,8,9}	--	1949	30,000	103,737	1
Claiborne County Port, MS	--	1985	2,000,000	775,509	Dec. 1983
Cypress Bayou and Waterway between Jefferson, TX, and Shreveport, LA ¹⁵	Complete	1971	202,817	452,611	Dec. 1914
Homochitto River, MS ⁴	--	1910	15,482	8,518	1
Lake Providence Harbor, LA	--	1985	208,537	2,579,609	Nov. 1963
Little Missouri River, AR ^{1,4,5}	--	1873	19,992	--	1
Little River, LA ^{1,4,5,10}	--	1890	1,500	--	1
Little Tallahatchie River, MS ^{1,7}	--	1913	19,000	--	1
Madison Parish Port, LA	--	1985	656,000	1,414,169	Dec. 1980
Mouth of Yazoo River, MS ^{1,7,11}	--	1953	1,179,211	11,370,203	1
Ouachita and Black Rivers, AR and LA, Felsenthal Canal	--	1937 ¹²	--	4,387,192	1
Overton-Red River Waterway, LA	--	1985	--	--	1
Pearl River, MS	--	1985	8,562,908	4,158,799	1956
Red River below Fulton, AR ^{1,16,17,18}	--	1978	1,963,806	2,147,890	1
Red River Waterway LA, AR, OK, and TX ^{1,17,18}	--	1969	1,752,402	--	1
Red River Waterway, Shreveport, LA to Daingerfield, TX ¹	--	1976	150,800	--	1
Removings snags and wrecks from Mississippi River below mouth of Missouri River and from Old and Atchafalaya Rivers ¹¹	--	1948	--	272,500	1
Rosedale Harbor, MS	--	1985	2,000,000	8,237,357	Sep. 1978
Saline River, AR ^{1,3,4,5}	--	1931	26,900	12,792	1
Tallahatchie and Coldwater Rivers, MS ^{1,4,5}	--	1939	43,481	173,066	1
Tensas River and Bayou Macon, LA ^{1,8,13}	--	1949	38,367	85,352	1
Yalobusha River, MS ^{1,4,5,14}	--	1937	7,000	15,936	1

TABLE 12-D OTHER AUTHORIZED NAVIGATION PROJECTS
(Continued)

Project	Status	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
			Construction	Operation and Maintenance	
Yazoo River, MS	--	1987	9,341,826	1,217,492	¹
Yellow Bend Port, AR	Complete	1991	3,793,069	1,416,030	Aug. 1991

1. Status and Date unavailable.
2. Abandonment recommended in H. Doc. 1962, 64th Cong., 2d sess., and H. Doc. 467, 69th Cong., 1st sess.
3. Channels adequate for existing commerce.
4. Inactive project. No commerce.
5. Abandonment recommended in H. Doc. 467, 69th Cong., 1st sess.
6. Project curtailment recommended by elimination of work between Pentecost and mouth of Hushpuckena River. (Abandonment of entire project erroneously recommended in H. Doc. 467, 69th Cong., 1st sess.)
7. See report of Mississippi River Commission for operations in connection with Yazoo Basin.
8. Report of New Orleans District, pp. 919-920 for Fiscal Year 1949.
9. Project curtailment recommended by elimination of work above Girard, LA. (Abandonment of entire project recommended erroneously in H. Doc. 467, 69th Cong., 1st sess.)
10. Due to decline of traffic, local interests not sufficiently interested to provide rights-of-way and dumping privileges.
11. No additional funds available under this project. Work is being carried on under appropriation flood control, Mississippi River and tributaries.
12. Year authorized.
13. Inactive. Channel adequate for commerce.
14. See report of Mississippi River Commission for operations in connection with Yazoo Basin flood control project including channel clearing and rectification and Grenada Lake on Yalobusha River.
15. Excludes \$50,000 contributed funds.
16. Includes \$1,553,878 for previous projects.
17. Incorporated in the project "Red River Waterway-Mississippi River Shreveport, LA" Sept. 30, 1976.
18. Emergency bank protection on this project is reported separately as "Red River Emergency Bank Protection." Two reaches, "Red River Waterway-Mississippi River to Shreveport, LA" and "Red River Waterway-Shreveport, LA, Daingerfield, TX," are also reported separately.
19. Includes \$674,068 for new work on previous projects.

TABLE 12-E **OUACHITA RIVER AND TRIBUTARIES:**
EXISTING PROJECT
(See Section 10 of Text)

Project	For Last Full Report See Annual Report for:	Estimated Federal New Work Cost
Blakely Mt. Dam-Lake Ouachita, AR	1985	\$ 44,100,000
DeGray Lake, AR	1985	72,034,000 ²
Narrows Dam-Lake Greeson, AR	1985	20,900,000
Calion, AR	1960	970,996 ³
Columbia, LA	1941	204,740 ³
Existing levees and extensions thereto from Bastrop, LA, to mouth of Boeuf River and at West Monroe, LA	1961	3,025,181 ³
Little Missouri River below Murfreesboro, AR	1957	354,802 ³
Ozan Creek, AR	1957	57,742 ³
Terre Noire Creek, AR	1948	123,700 ³
Pine Bluff, AR, local protection	1954	172,582 ³
Monroe, LA, floodwall extension (Plan B)	1984	2,561,000 ³
Ouachita River Levees (additional work)	(¹)	<u>6,001,000</u>
Total		\$150,505,743 ⁴

1. See individual reports herein.

2. Includes \$5,800,000 for water supply to be reimbursed by local interests.

3. Actual cost of completed project.

4. Excludes the authorized Murfreesboro Lake, AR, project, which is inactive. The latest estimated cost (1954) was \$4,190,000.

TABLE 12-F
RED RIVER BELOW DENISON DAM
(VICKSBURG DISTRICT): NEW PROJECTS
(See Sec. 13 of Text)

Project	Stream	Drainage Area (square miles)	Conservation Storage (acre-feet)	Flood Control (acre-feet)	Estimated Federal Cost
Bayou Bodcau and tributaries, AR ² and LA	--	1,158	--	--	\$25,100,000 ³
Bayou Nicholas-Coushatta, LA	--	--	--	--	70,717 ⁴
Bayou Pierre in vicinity of Shreveport, LA ⁵	--	--	--	--	243,336 ³
Caddo Lake, LA ¹	Caddo Lake	--	--	--	3,586,000
Campti-Clarence Area in Natchitoches Parish, LA	Red River	--	--	--	1,950,000 ³
Garland City, AR ^{1,6}	--	--	--	--	1,450,000 ³
Maniece Bayou, AR	--	--	--	--	970,032 ³
McKinney Bayou, AR ^{7,8}	--	--	--	--	5,610,000 ³
Posten Bayou, AR and LA ^{2,6,9}	--	--	--	--	560,000
Red River below Denison Dam levees and bank stabilization, TX, AR, and LA ^{1,3}	--	--	--	--	81,975 ³
Total					99,191,885

1. Details presented in individual report herein.

2. Construction on this project not started.

3. In addition, non-Federal funds are:

Bayou Bodcau and tributaries, AR and LA	\$5,300,000
Bayou Pierre in vicinity of Shreveport, LA (cash contribution)	89,047
Caddo Lake, LA.....	28,000
Campti-Clarence Area in Natchitoches Parish, LA.....	480,000
East Point.....	67,000
Garland City, AR	6,000
Maniece Bayou, AR (cash contribution).....	18,000
McKinney Bayou, AR (cash contribution)	508,000
Red River below Denison Dam, levees and bank stabilization, TX, AR, and LA	3,241,000

4. For last full report, see Annual Report for 1964.

5. For last full report, see Annual Report for 1951.

6. Inactive.

7. Includes \$4,330,200, Code 711, and \$399,739 accelerated Public Work funds.

8. Joint-use pool (sediment).

9. Deauthorized by resolution Dec. 17, 1970, which also authorized new project "Posten Bayou, AR," under provision of Sec. 201 of Flood Control Act of 1965.

TABLE 12-G
RED RIVER BELOW DENISON DAM
(VICKSBURG DISTRICT): INCORPORATED
PROJECTS (See Sec. 13 of Text)

Project	Type of Work	Flood Control Act	For Last Estimated Federal Cost	Full Report See Annual Report For:
Aloha-Rigolette Area, Grant and Rapides Parishes, LA	Levee and appurtenances	1941	\$ 1,653,237 ¹	1956
Bayou Bodcau Reservoir, LA ²	Flood-control reservoir	1938	5,120,7401	⁴
Bayou Bodcau, Red Chute, and Loggy Bayou, LA	Channel improvement	1941	319,200 ¹	1948
Bayou Pierre, LA	Channel enlargement	1936	255,529 ¹	⁴
Black Bayou Lake, LA ^{5,6}	Flood-control reservoir	1936	714,000	1945
Colfax, Grant Parish, LA	Cutoff	1938	70,348 ^{1,7}	1938
Grant Parish, below Colfax, LA	Levees	1938	38,809 ¹	1941
Hempstead County levee district No.1, AR	Levee enlargement	1938	88,006 ¹	1941
Natchitoches Parish, LA	Levee and appurtenances	1936	1,529,927 ^{1,8}	1956
Pineville, Red River, LA	Levee and appurtenances	1941	232,426 ¹	1953
Red River in vicinity of Shreveport, LA	Bank protection	1944	3,908,000 ¹	1953
Red River Parish, LA	Levee enlargement	1936	149,435 ¹	1939
Saline Point, LA	Cutoff	1936	124,111 ¹	1945
Wallace Lake, LA	Flood-control reservoir	1936	1,219,371 ^{1,3}	⁴
West Agurs, LA	Levee and appurtenances	1976	0	
Total			\$15,467,134	

1. Actual cost.

2. Project transferred to Vicksburg District, August 1982.

3. Includes amounts indicated for recreational facilities under Code 711, Bayou Bodcau Reservoir, LA, \$1,027,000; Wallace Lake, LA, \$17,164.

4. Included in this report.

5. Work not started.

6. Inactive.

7. Completed under provisions of Sec. 7 of Flood Control Act of 1928, as amended by Sec. 9 of Flood Control Act of 1936, and included in 1939 Annual Report of President, Mississippi River Commission, p. 2214.

8. In addition, \$25,000 was expended from contributed funds.

TABLE 12-H **OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
		Construction	Operation and Maintenance	
Aloha-Rigolette Area, Grant and Rapides Parishes, LA ¹	1956	\$ 1,896,826	\$ --	Apr. 1955
Bayou Bodcau and Tributaries AR and LA	1995	1,037,952	1,600,919	--
Bayou Bodcau, Red Chute, and Loggy Bayou, LA ¹	1948	319,200	353,298	Jan. 1948
Bayou Bodcau Reservoir, LA	1985	--	8,110,182	Apr. 1961
Bayou Pierre, LA	1985	--	435,264	FY 1939
Bayou Pierre in vicinity of Shreveport, LA ^{1,2}	1951	243,336 ²	--	Jun. 1939
Big Black River, MS ³	1956	910,185	670,750	³
Big Choctaw Bayou, LA ^{3,4}	1966	248,823	--	³
Black Bayou Reservoir, LA ^{1,5,6}	1945	--	--	--
Blakely Mt. Dam - Lake Ouachita, Ouachita River, AR	1985	34,023,108	124,939,117	Oct. 1955
Caddo Lake Dam, LA	1986	--	2,657,373	--
Campti-Clarence Area in Natchitoches Parish, LA	1978	1,655,700	--	Jul. 1978
Canal 43, AR	1997	898,061	--	Aug. 1990
Chauvin Bayou, LA	1995	4,245,863	--	--
Colfax, Grant Parish, LA ^{1,7}	1938	70,348	--	--
DeGray Lake Caddo River, AR	1985	72,033,992	91,099,407	Dec. 1971
East Point, LA	1969	286,069	3,051,536	Aug. 1968
Garland City, AR	1976	1,335,841	--	Jul. 1974
Grant Parish below Colfax, LA ^{1,3}	1941	38,809	--	³
Hempstead County Levee District No. 1, AR ^{1,3}	1941	88,006	--	³
Homochitto River, MS ³	1956	205,000	144,650	³
Maniece Bayou, AR ^{1,2}	1970	970,932 ²	--	Aug. 1969
Monroe Floodwall, LA	1984	2,560,000	--	--
Murfreesboro Dam and Lake ⁴	1951	--	--	--
Narrows Dam-Lake Greeson, Little Missouri River, AR	1985	16,516,689	91,831,389	May 1950
Natchez Port Area, MS ^{3,4}	1969	538,000	--	⁵

TABLE 12-H
(Continued)

OTHER AUTHORIZED FLOOD
CONTROL PROJECTS

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
		Construction	Operation and Maintenance	
Natchitoches Parish, LA ^{1,2}	1956	1,529,478	--	Aug. 1955
Pearl River, Jackson-East Jackson, MS	1986	2,790,127	--	1987
Pineville, Red River, LA ^{3,4}	1953	232,426	--	Dec. 1951
Lead Bayou, MS	1991	1,961,089	--	Nov. 1988
Porter Bayou	1995	1,049,278	--	Sep. 1993
Posten Bayou, AR ⁸	1973	--	--	--
Poverty Point, LA	1986	250,000	--	Oct. 1985
Red River Parish, LA ^{1,3}	1939	149,435	--	³
Red River in vicinity of Shreveport, LA ¹	1953	3,908,000	--	Mar. 1953
Red River Waterway, Shreveport, LA to Index, LA ⁹	1994	855,497	--	--
Saline Point, LA ^{1,3}	1945	124,111	--	--
Twelvemile Bayou, LA ⁴	1966	335,433	--	May 1965
Wallace Lake, LA	1985	--	2,862,348	Dec. 1946

1. Authorized under project "Red River Below Denison Dam."

2. In addition, the following was expended from contributed funds:

Amite River and tributaries.....	\$ 430
Bayou Pierre in vicinity of Shreveport, LA	89,047
Choctaw Bayou and Tributaries, LA	170,799
Harvey Canal, Bayou Barataria Levee, LA.....	425,209
Maniece Bayou, AR.....	39,293
Natchitoches Parish, LA	250,000

3. Completion Date Unavailable.

4. Authorized by Chief of Engineers under authority of Sec. 205, Flood Control Act of 1948, as amended.

5. Construction not initiated.

6. Inactive.

7. Completed under provisions of Sec. 7 Flood Control Act of 1928, as amended by Sec. 9, Flood Control Act 1936, and included in 1939 Annual Report of President, Mississippi River Commission, p. 2214.

8. Posten Bayou Project, authorized by Senate and House Resolutions, Dec. 17 and 15, 1970, deleted the plan authorized by the Flood Control Act dated Aug. 3, 1955.

9. Excludes New Orleans District allocation and cost.

TABLE 12-I **DEAUTHORIZED PROJECTS**

Project	For Last Full Report See Annual Report For	Date And Authority	Federal Funds Extended	Contrib Funds Exp
Bayou Bartholomew and Tributaries, AR and LA	1990	May 17, 1950 S. Doc. 117, 81st Cong., 1st sess.	974,000	--
Buffalo River, MS ¹	1940	Nov 1986	--	--
McKinney Bayou, Finn Bayou Segment, AR	1963 ²	Aug 1977	--	--

1. Deauthorized by Sec. 1002, Water Resources Development Act of 1986.

2. Date Authorized.

**TABLE 12-J ACTIVE GENERAL INVESTIGATIONS
(96X3121)**

Item and CWIS Number	FY 04 COSTS		
	Federal	Non-Federal	Total
SURVEYS (Category 100)			
<u>Navigation Studies (110)</u>			
Red River Navigation Study, S.W. Ark. - 010436	177,081	169,259	346,340
Subtotal	177,081	169,259	346,340
<u>Flood Damage Prevention (120)</u>			
Jackson Metro – 012742	331,917		331,917
Subtotal	331,917		331,917
<u>Reconnaissance (121)</u>			
Hot Springs Creek Study, AR — 081494	33,162		33,162
Subtotal	33,162		33,162
<u>Miscellaneous Activities (170)</u>			
Interagency Water Resources (173) — 14713	11,992		11,992
Special Investigations (171) — 17250	10,007		10,007
North American Water – 053904	1,527		1,527
Subtotal	23,526		23,526
COORDINATION WITH OTHER AGENCIES AND NON-FEDERAL INTERAGENCIES (180)			
COOP With Other Water Agencies — 053907	1,008		1,008
PAS – Negotiation Funds – 014800	5,001		5,001
PAS – LA-Areawide Optimization – 22066	2,165	12,363	14,528
PAS – Cross Lake Storage Capacity – 22078		20,366	20,366
PAS – Pearl River County FP GIS, Ph. II – 28015	204,797	124,311	329,108
PAS – Port Bienville, Hancock County, MS – 28013	2,801	4,600	7,401
Subtotal	215,772	161,640	377,412
TOTAL (Category 100)	781,458	330,899	1,112,357
COLLECTION AND STUDY OF BASIC DATA (Category 200)			
<u>Flood Plain Management Services (250)</u>			
Flood Plain Management Services – 82030	33,999		33,999
Quick Response – 82045	6,001		6,001
Special Studies			
Technical Services – 82040	57,561		57,561
Subtotal	97,561		97,561
<u>Hydrologic Studies (260)</u>			
Hydrologic Studies (260) – 53820	5,209		5,209
Subtotal	5,209		5,209
TOTAL (Category 200)	102,770		102,770
GRAND TOTAL GENERAL INVESTIGATIONS	\$ 884,228	\$330,899	\$1,215,127

MEMPHIS, TN, DISTRICT

This district comprises a portion of southeastern Missouri and southern Illinois, western portions of Kentucky and Tennessee, a small portion of northern Mississippi, and the northeastern portion of Arkansas; includes area embraced in drainage basins of eastern tributaries of the Mississippi River south of Ohio River Basin to Nonconnah and Horn Lake Creeks, inclusive, and those of western tributaries south of Castor River

diversion channel and Commerce, MO, including St. Francis River Basin and White River and tributaries below Peach Orchard Bluff, AR, on the right bank and below Augusta, AR, on the left bank; also includes left bank Mississippi River levee from vicinity of Memphis south to about mile 620, and right bank levees from Cape Girardeau, MO, to about mile 605.

IMPROVEMENTS

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Environmental Infrastructure

1. DESOTO COUNTY, MS

Location. DeSoto County is located in north Mississippi, just south of Memphis, TN. The county's rapid growth demands expansion of existing sewer systems and the development of new systems into one unified county-wide system.

Existing project. Section 219 of WRDA 1992, as amended in Section 502 of WRDA 1999 and Section 108 of the Consolidated Appropriations Act, 2001 authorized \$20,000,000 for the design and construction of a regional wastewater system in DeSoto County, Mississippi.

Local cooperation. DeSoto County Regional Utility Authority is the local sponsor for the project. A PCA Amendment to include current Corps of Engineers authorized participation was executed on Aug. 19, 2003. The local sponsor's A-E firm provided design services for preparation of plans and specifications in coordination with the Memphis District. Memphis District also acquired engi-

neering and field inspection support services for construction from the sponsor's A-E firm.

Operations during fiscal year. Memphis District continued construction on the Short Fork Creek Wastewater Treatment Plant and Byhalia Road Pump Station and awarded three additional contracts for construction of the Camp Creek Canal Interceptor Completion of the currently authorized project is scheduled in FY 2005. During this period, Federal cost was \$9,122,666 for DeSoto County Wastewater Treatment, MS

Other Activities

2. INSPECTION OF COMPLETED WORKS

Completed projects were inspected at a cost of \$186,933 during this period. Total cost as of Sep. 30, 2004, was \$4,062,862. This included in-depth inspection of projects.

3. WORKS UNDER SPECIAL AUTHORITIES

Navigation activities pursuant to Sec. 107, Public Law 87-645, as amended.

During this period, \$60,987 Federal was expended on Blytheville Harbor, AR; \$118,116 Federal and \$85,969 non-Federal on Northwest Tennessee Regional Harbor, TN.

Flood control activities pursuant to Sec. 205, Public Law 858, 80th Cong., as amended (preauthorization).

During this period \$15,106 was expended on Section 205 Coordination Account; \$32,163 was expended on Anderson Creek TN \$5,024 was expended on Bayou De Chein KY; \$101 was expended on Baxter Bottom, TN; \$5,028 was expended on Dresden TN; \$255 was expended on Higginson AR; \$16,789 was expended on Indian Bayou Ditch, AR; \$45,178 was expended on Lilbourn MO \$15,269 was expended on Little River Diversion MO; \$34,696 was expended on Sandy Creek TN; \$53,918 was expended on Cane Creek, TN; \$54,599 was expended on Jones Creek, TN; \$48,563 was expended on Red Duck Creek, KY; \$49,754 was expended on Wynne, AR; \$59,000 was expended on Munford, TN; \$243 was expended on Spring Creek St Francis County, AR.

Emergency bank stabilization activities pursuant to Sec. 14, Public Law 526, 79th Cong., as amended.

During this period, \$14,974 was expended on Section 14 Coordination Account; \$3,875 was expended on Colt, AR; \$76,883 was expended on Hollywood Interceptor, TN; \$103,066 was expended on Mt Moriah Culvert, TN; \$14,808 was expended on Turkey Creek, TN; \$39,210 was expended on Oakland TN; \$22,087 was expended on Memphis North Treatment Plant, TN; \$24,260 was expended on Tippah County Road, MS; and \$18,972 was expended on Red Duck – Ninth Street, KY.

Snagging and clearing of navigable streams and tributaries in the interest of flood control (Sec. 208 of 1954 Flood Control Act, Public Law 780, 83rd Congress).

During this period, \$14,875 was expended on Section 208 Coordination Account.

Project Modifications for improvement of environment pursuant to Sec. 1135, Public Law 99-662, as amended (preauthorization).

During this period \$5,044 was expended on Section 1135 Coordination Account; \$15,289 was expended on Ditch 28 Structure & Levee, AR; \$48,532 was expended on Duck Creek, MO; \$82311 was expended on Horseshoe Lake, AR; \$2,981 was expended on Old No. 7 Chute, MO.

Aquatic Ecosystem Restoration, Public Law 104-303, Sec. 206

During this period, \$9,175 was expended on Aquatic Ecosystem Restoration Coordination Account Funds. \$32,360 was expended on Brownsville Branch AR

4. EMERGENCY RESPONSE ACTIVITIES

Emergency flood control activities, Public Law 99, 84th Cong.

During this period, Federal cost was \$237,755 for disaster preparedness.

Catastrophic Disaster Preparedness Program

Local Preparedness	\$ 0
National Preparedness	26,737
National Emergency Facilities	3,438
Readiness Training & Exercise	
Task Force	<u>0</u>
Total	\$ 30,175

5. GENERAL REGULATORY PROGRAM

Permit Evaluations	\$ 1,435,287
Enforcement	189,916
Appeals	<u>8,266</u>
Total	\$1,633,469

TABLE 13-A COST AND FINANCIAL STATEMENT

See Section in Text	Project	Funding	FY 02	FY 03	FY04	Total Funds to Sep 30,2004
1.	Desoto County, MS	New Work				
		Approp.	651,000	4,261,000	9,086,000	14,142,000
		Cost	431,122	4,477,429	9,122,666	14,122,289

TABLE 13-B **AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Section 219 of WRDA 1992, as amended in Section 502 of WRDA 1999 and Section 108 of the Consolidated Appropriations Act, 2001	Desoto County Wastewater Treatment, MS DeSoto County is located in north Mississippi, just south of Memphis, TN. The county's rapid growth demands expansion of existing sewer systems and the development of new systems into one unified county-wide system.	Public Law 106-53, 106th Congress Aug. 17, 1999

TABLE 13-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report For:	Cost to Sep. 30, 2004	
			Construction	Operation and Maintenance
Caruthersville Habor, MO	Annual Dredging	1984	\$768,992	\$ 9,746,107
Helena Harbor, AR	Annual Dredging	1984	90,847	9,118,565
Elvis Stahr Harbor, KY	Annual Dredging	1984	149,827	10,103,249
New Madrid Harbor, MO ⁶		1984	196,373	--
Obion River, TN ^{1,3}	Complete	1911	28,716	--
Osceola Harbor, AR	Annual Dredging	1984	269,115	13,280,110
Removing snags and wrecks from Mississippi River below mouth of the Missouri River and Old and Atchafalaya River ^{4,5}	Complete	1948	--	--
White River, AR (below Newport)	Annual Dredging	1984	169,994	50,917,956
Wolf River Harbor, TN	Annual Dredging	1984	586,50	16,178,940
New Madrid County Harbor, MO	Annual Dredging	2000	824,267	3,326,538

1. No commerce.
2. Existing project is for maintenance only.
3. Recommended for abandonment in H. Doc. 467, 69th Cong., 1st session.
4. Completion date not available.
5. No funds available under this project. Work being carried on under "Appropriation, Flood Control, Mississippi River and Tributaries."
6. WRDA 92 (Section 102) modified authorization by directing the Secretary to assume responsibility for maintenance of New Madrid County Harbor constructed by non-Federal interest.

TABLE 13-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	Status	For Last Full Report See Annual Report For:	Cost to Sep. 30, 2004	
			Construction	Operation and Maintenance
Big Creek Canal, Millington, TN	--	1977	\$ 70,363	\$ --
Bradford, TN	Complete	1984	95,061	--
Cottonwood Slough pumping plant, IL ¹	Complete	1964	147,000	--
Cypress Creek, McNairy City, TN	--	1998	10,883	--
Dails Creek, Holly Grove, AR	--	1996	462	--
Drinkwater Sewer, MO	Complete	1984	1,494,828	--
Dyersburg, TN ¹	Complete	1962	229,649 ²	--
Dyersburg, TN (SW)	Complete	1981	1,820,869	--
Fletcher Creek at Memphis, TN	Complete	1993	421,898	--
Grays Creek Canal Shelby Co., TN	Complete	1985	155,280	--
Hatchie River, Alcorn Co., MS	Complete	1987	85,200	--
Humboldt, TN	Complete	1989	1,141,407	--
Memphis, Wolf River, and Nonconnah Creek, TN	Complete	1960	11,141,199	--
Main Ditch #8	Complete	2002	1,971,7000	--
Loosahatchie Intreceptor Sewer, Shelby	Complete	1998	394,000	--
Millington, TN	Complete	1996	830,898	--
Mounds and Mound City, Ohio River Basin, IL ³	Complete	1955	1,132,704	--
Nixon Creek, TN ¹	Complete	1952	62,821	--
Nonconnah Blvd. Nonconnah Creek, TN	Complete	1983	249,999	--
Nonconnah Creek, Interceptor Sewer, Memphis, TN	Complete	1987	259,000	--
Nonconnah Creek at Perkins Street, Memphis, TN	Complete	1993	830,781	--
N. Second St., Memphis, TN (Wolf River Bridge)	Complete	1983	249,999	--
N. Second St. at Wolf River, Memphis, TN	Complete	1991	367,012	--
Plainview Road Bridge, Chester County, TN	Complete	1991	124,954	--
Quince Road Bridge, Memphis, TN	Complete	1993	156,565	--
Raft Creek, AR	--	1997	245	--
Sandy Creek Jackson, TN	Complete	1985	238,000	--
St. Francis River Highway No. 90, AR	Complete	1985	161,000	--
Tar Creek, Chester County, TN	--	1997	1,161	--
Treasure Island, MO	Complete	1981	861,528	--
Turner Creek, Corinth, MS	Complete	1987	100,600	--
US Hwy 51, Nonconnah Creek, TN	Complete	1984	369,200	--
W. Hickman, Area, Hickman, KY	Complete	1983	1,674,180	--

1. Authorized by Chief of Engineers under small project authority, Sec. 205, Flood Control Act of 1948, as amended.

2. Includes \$21,863 contributed funds.

3. Work being completed under Mississippi River and Tributaries project.

4. Exclusive of Cache River Pumping Station.

TABLE 13-G

DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		
		Date Deauthorized	Federal Funds Expended	Contributed Funds Expended
Big Creek and L'Anguille River, White River Basin, AR	1977	May 6, 81	\$ --	--
Clarendon to Laconia Circle White River Basin, AR	1937	May 6, 81	--	--
Huntingdon, TN	1983	Sep 80	--	--
Long Lake Area, Helena, AR	1983	Jul 83	--	--
Memphis Harbor, Memphis, TN	--	Nov 29, 95	--	--

**TABLE 13-H ACTIVE GENERAL INVESTIGATIONS
(96X3121)**

Item and CWIS Number	Federal Cost FY 04	Totals by Categories
SURVEYS (Category 100)		
<u>Miscellaneous Activities (170)</u>		
Special Investigations (171) - 17250	\$8,588	
Intra Agency Water Resources Development-14713	4,959	
North American Waterfowl Mgmt (176) - 53904	<u>3,596</u>	
		\$17,143
<u>Coordination Studies with Other Agencies (180)</u>		
Coop with Other Water Agencies (181) - 53907	\$457	
PAS Negotiation Funds(186) - 014800	2,768	
PAS – TN – Memphis Riverfront (186) - 047015	62,936	
PAS – TN – Shelby County (186) - 047011	84	
PAS – MS – DeSoto County (186) – 28012	466	
PAS – MS – Buck Island Bayou (186) – 28016	17	
PAS – TN – Oliver Creek, Lakeland (186) – 47020	58,910	
TOTAL (Category 100)		\$125,638
<u>Watershed/Comprehensive Studies (150)</u>		
White River Basin – 010641	274,692	
TOTAL (Category 150)		\$274,692
COLLECTIONS AND STUDY OF BASIC DATA (Category 200)		
<u>Flood Plain Management Services (250)</u>		
Flood Plain Mgmt Services - 082030	\$9,958	
Technical Services - 082040	32,298	
Quick Responses - 082045	3,014	
Jonesboro, AR - 083180	205	
Kennett, MO – 083181	<u>3,724</u>	
Special Studies, Dexter, MO – 083441	<u>21,086</u>	
TOTAL (Category 200)		<u>\$70,285</u>
<u>Preconstruction Engineering and Design (Category 600)</u>		
White River to Newport, AR (621) - 060740	<u>\$99,853</u>	
TOTAL (Category 600)		<u>\$99,853</u>
GRAND TOTAL GENERAL INVESTIGATIONS		<u>\$340,611</u>

ST. LOUIS, MO, DISTRICT

This district comprises those portions of southwestern Illinois and eastern Missouri which lie in the drainage basin of Mississippi River and its western tributaries, exclusive of the Missouri River, from the mouth of the Ohio River to mile 300, and of its eastern tributaries to Hamburg Bay at mile 261 on the left bank, exclusive of tributary basin of Illinois Waterway upstream of new La Grange Lock and Dam at mile 80.15 above confluence of the Illinois and Mississippi Rivers. The St. Louis District territory encompasses 27,000 square

miles. The District also includes a drainage basin in Missouri tributary to the Little River diversion channel. The Mississippi River between the Missouri River and mile 300 is included in a separate report on the Mississippi River between the Missouri River and Minneapolis, MN. The portion of the Illinois River downstream of new La Grange Lock and Dam is included in the report of the Chicago District on the Illinois Waterway, Illinois and Indiana.

IMPROVEMENTS

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Navigation

1. ILLINOIS WATERWAY, IL (ST. LOUIS DISTRICT)

See report on Illinois Waterway, IL and IN, under Rock Island District.

2. KASKASKIA RIVER, IL

Location. The river rises in Champaign County, IL, about 5 miles northwest of Urbana, in the east-central part of the state. It flows southwesterly about 325 miles and empties into the Mississippi River about 8 miles above Chester, IL, or about 118 miles above the mouth of the Ohio River. (See Cincinnati sheet of maps of United States published by Army Map Service, scale 1:500,00.)

Previous project. For details, see Annual Report for 1986.

Existing project. Improvement for navigation provides a channel 9 feet deep and 225 feet wide from the mouth to Fayetteville, IL. Improvements included channel enlargement and a dam at mile 0.8 with a single lock 84 feet wide and 600 feet long. Federal cost totaled \$147,387,000; non-Federal cost totaled \$7,665,000, which included \$1,118,160 local contributions.

Local cooperation. State of Illinois passed legislation authorizing Illinois Department of Public Works and Buildings to enter into assurances of local cooperation with the United States. These assurances have been furnished and were accepted on behalf of the United States on Sep. 10, 1965; these assurances were supplemented on Aug. 7, 1972, to incorporate the provisions of Public Law 91-646.

Operations and result during fiscal year. Hired labor performed operation (\$2,115,956) and maintenance (\$190,709) of the project.

3. MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS, MN (ST. LOUIS DISTRICT)

See separate section entitled "Mississippi River between Missouri River and Minneapolis, MN," printed in the Annual Report of the Chief of Engineers. This section includes Lock & Dam 24 Major Rehabilitation, Lock & Dam 25 Major Rehabilitation, and Melvin Price Locks & Dam.

4. MISSISSIPPI RIVER BETWEEN OHIO AND MISSOURI RIVERS, MO AND IL

Location. The Mississippi River rises in Lake Itasca, MN, and from that lake flows southerly about 2,340 miles and empties into the Gulf of Mexico. Portion included in this report embraces the 195-mile section known as "Middle Mississippi," between tributary Ohio and Missouri Rivers about 974 to 1,169 miles from the gulf. (See folder by Corps of Engineers Navigation Charts, Middle and Upper Mississippi River, Cairo, IL, to Minneapolis, MN.)

Previous projects. For details, see page 1879 of Annual Report for 1915 and page 1014 of Annual Report for 1938.

Existing project. The existing project provides for obtaining and maintaining a minimum channel depth of not less than 9 feet, a minimum width of not less than 300 feet at low water, with additional widths in bends from mouth of Ohio River (about 974 miles from gulf) to northern boundary of city of St. Louis, mile 191, thence 200 feet wide, with additional width in bends to mouth of Missouri River, mile 195; to be obtained: (1) by regulating works, for closing secondary channels, contracting river by building new banks where river width is excessive and protecting new and old banks from erosion where necessary to secure permanency at an estimated total Federal cost (Oct 2003 price level) of \$270,000,000; (2) by dredging to maintain project channels; (3) by construction of works authorized for Chain of Rocks reach in 1945 River and Harbor Act, which approved a comprehensive plan for development of the river at Chain of Rocks to provide for construction of a lateral canal at a cost of \$59,720,600; and (4) by construction of a fixed-crest rock-fill dam about 900 feet below Chain of Rocks Bridge, authorized by 1958 River and Harbor Act, at a cost of \$4,353,000, excluding \$7,000 costs to Coast Guard for aids to navigation. A small boat harbor opposite Chester, IL, was deauthorized and excluded from foregoing cost estimate. See H. Doc. 669 (76th Cong., 3rd sess.) for report of Chief of Engineers dated Feb. 27, 1940, containing a general plan for improvement of Mississippi River between Coon Rapids Dam and mouth of Ohio River for purposes of navigation, power development, flood control, and needs of irrigation.

Local cooperation. None required.

Terminal facilities. Existing facilities are considered adequate for existing commerce.

Operations and results during fiscal year. Regulating Works: purchased easements and continued tree planting contract for the Thompson Bend riparian corridor, engineering and design, and supervision and administration. Construction on existing project began in 1881 and project has been in beneficial use practically from its inception. Projects on Dam 27 and Chain of Rocks are complete. Work on the project is about 80 percent complete. Channel as a whole has been greatly improved by the work completed to date. Dredging is required at low stages to remove temporary shoals and maintain required channel depths. River is generally above 10-foot stage, St. Louis gage, from latter part of February to the latter part of August, during which time project channel depths generally prevail without dredging.

Following the great Mississippi River flood of 1993, it became apparent that the Chain of Rocks, East Canal Levee, was not performing as intended. Sand boils developed along a sizeable reach at flood elevations considerably below design height. Emergency repairs were completed in FY 97. Deficiency corrections (additional berms, relief wells, and a pump station) are estimated at \$33,400,000 (Oct 03 price level). These corrections were initiated in FY 99 and continued in FY 04.

Maintenance. Work consists of approximately 2,000 feet of dike repair and 5,000 feet of revetment repair yearly. U.S. plant and hired labor plus contract dredging perform channel dredging removing 5,000,000 to 10,000,000 cubic yards of material (average year) from main channel. Condition and operation studies, recreation planning, engineering and design, and operation and maintenance of Lock and Dam 27 continued. In Aug 04, performed emergency repair work on the lock gates at Lock and Dam 27, which is in need of major rehabilitation. (Major rehabilitation report was approved in Aug 02.)

5. ST. LOUIS HARBOR, MO AND IL

Location. The project area includes both sides of the Mississippi River from miles 138.8 to 208.8 above the Ohio River (generally, the limits of the Port of Metropolitan St. Louis).

Existing project. The project was authorized by the Water Resources Development Act of 1986. The authorized project includes improvements in two areas: the North Riverfront area in Missouri (which is served by the St. Louis Municipal Docks) and the Tri-City Port area along the east bank of the Chain of Rocks Canal in Illinois. The principal project at the St. Louis Municipal Docks is an L-dike sediment control struc-

ture in the river to provide reliable water access to the dock when the river is low. The principal project at the Tri-City Port area is a 210 ft. wide harbor along 6,900 ft. of the Chain of Rocks Canal. The North Riverfront project and half the Tri-City harbor (3,450 ft.) would be constructed in Phase 1, and the second half of the Tri-City harbor in Phase 2 approximately 10 years later. Estimated cost of the project (2000) is \$15,524,000 Federal and \$30,624,000 Non-Federal. A March 1986 Reevaluation Report described model tests which showed that the L-dike sediment control structure recommended for the St. Louis Municipal Docks would not be effective but that appropriate configuration of a new outer wall for the docks, referred to as the Prototype River Access Improvement Structure (PRAIS), would divert currents so as to control scour and sedimentation and maintain sufficient water depths for the needs of the harbor.

Local cooperation. The District coordinated with the two local sponsors and found that (1) the city of St. Louis is unable to continue as a sponsor for the PRAIS project and (2) the Tri-City Regional Port Authority wants the Corps to consider a project location just below the mouth of the Chain of Rocks Canal adjacent to the former Charles Melvin Price Support Center that the sponsor recently acquired. The proposed reconfigured harbor facility is considerably smaller than the authorized 6,900-foot facility.

Operations and results during the fiscal year. A draft negative report is being prepared, which will terminate the Corps' effort on this project.

6. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

No activity in FY 04.

Flood Control

7. ALTON TO GALE ORGANIZED LEVEE DISTRICTS, IL & MO

Location. The levee system is located adjacent to the Mississippi River between Alton and Gale, Illinois.

Existing Project. The project is authorized by the Flood Control Acts of 1936, 1938 and 1946. Construction of the Alton to Gale levee system was completed in 1977. Some reaches of this levee system have, for many years, been experiencing a significant number of slides associated with design deficiencies increasing the probability of levee failure during flood events. The recommended plan will correct these slides by a lime stabilization procedure. Estimated cost (1997) is

\$109,018,000 Federal and \$4,374,000 non-Federal. Resumption of project initiated. New slides were discovered during the 1997 spring levee inspections. The contract to repair the Blue Waters Levee in the Metro East Drainage and Levee District was completed Oct. 1997.

Local cooperation. The cost sharing applicable for the Alton to Gale Levee Slide repairs is in accordance with policies established for the Water Resources Development Act of 1986, PL 99-662. The local sponsor is required to operate and maintain all works after completion. Supplemental assurances have been completed for a portion of the remedial work that was 100% federally funded. In Nov. 2000, ASACW granted an exception to the policy requiring non-Federal cost sharing for deficiency corrections. As a result, 44 levee slides were repaired at 100 percent Federal cost.

Operations and results during fiscal year. A draft letter report, which addresses future deficiency corrections, was reviewed.

8. BOIS BRULE, MO

Location. The Bois Brule project is located on the right bank of the Mississippi River, and is predominately in Perry County, Missouri, but has a small part in Randolph County, Illinois.

Existing Project. The existing project was authorized by the Flood Control Acts of 1936 and 1965. It consists of 33.1 miles of levee, 341 relief wells, and 4 pump stations. The Energy and Water Development Appropriations Act of 2002 provided directive language and funding to undertake design deficiency repairs with cost sharing consistent with the original project authorization. The deficiency correction project consists of 297 relief wells, seepage berms, a seepage cutoff trench, ditching, 3 pump stations, and restoration of 4.2 miles of the back levee to its design grade.

Local Cooperation. The Bois Brule Levee and Drainage District is the local sponsor and is responsible for land acquisition and relocations. The design and construction will be 100 percent Federal.

Operations and results during fiscal year. The Deficiency Correction Report was approved in November 2003, and the Project Cooperation Agreement was executed in April 2004. A contract for the first relief well contract was awarded in September 2004.

9. CAPE GIRARDEAU-JACKSON, MO

Location. Missouri, along the right bank of the Mississippi River between River Miles 50 and 55 above the Ohio River.

Existing Project. The project includes a 157 acre dry detention reservoir; approximately one mile of channel improvements on Cape La Croix Creek and two miles of channel improvements on Walker Branch, eight bridge replacements; recreational/environmental features and non structural features which are not going to be implemented at this time. The project is authorized by the Water Resources Development Act of 1986 (PL 99-662). The estimated Federal project cost is \$36,806,000. Non-Federal cost is \$13,787,000.

Local Cooperation. The city of Cape Girardeau, MO, local sponsor, is strongly supportive of the project. The Local Cooperation Agreement (LCA) was executed on May 25, 1990 with a modification to the LCA executed on Oct. 27, 1992. Requirements of local cooperation are fully described in the FY 1991 Annual Report.

Operations and results during fiscal year. Construction of the project was completed and transferred to the sponsor in FY 2004.

10. CHESTERFIELD, MO

Location. The Chesterfield, Missouri, project includes the Monarch-Chesterfield Levee, which is located in St. Louis County along the right bank of the Missouri River between river miles 46 and 38.5.

Existing project. The project was authorized by the Water Resources and Development Act of 2000 (P-L 106-541). The project includes a 5-7 foot levee raise, approximately 12 miles long; seepage berms; relief wells; closure structures; pump stations; and several gravity drains.

Local cooperation. The Monarch-Chesterfield Levee District signed a Design Agreement in August 2001.

Operations and results during fiscal year. Continued preconstruction engineering and design.

11. EAST ST. LOUIS AND VICINITY, IL

Location. Project is in St. Clair and Madison Counties, IL, on the left bank of the Mississippi River between river miles 175 and 195 above the Ohio River. Project includes all bottom lands between bluffs on the

east and Mississippi River and Chain of Rocks Canal on the west, and extends from Cahokia diversion channel on the north to Prairie du Pont Creek on the south. (See Corps of Engineers Navigation Charts, Middle and Upper Mississippi River, Cairo, IL, to Minneapolis, MN.)

Existing project. The 1936 Flood Control Act authorized raising and enlarging existing levee systems by construction or reconstruction of 19.8 miles of levee, including 3.1 miles of floodwall, together with necessary appurtenant works consisting of gravity drainage structures, highway and railroad closure structures, alterations and reconstruction of existing pumping plants, alterations to railroad bridges and approaches at levee crossings, service roads on levee crown, and seepage control measures. The completed 10 miles of levee along Chain of Rocks Canal and Lock 27 provide flood protection on the landward side integral with and to the same degree as the East St. Louis levee. Final cost of work under this authorization is \$22,550,100. The Flood Control Act of 1965 modified existing project to provide for channel improvements, diversion ditches, flood plain detention areas, a reservoir on Little Canteen Creek, and a pumping plant to considerably reduce damages resulting from interior flooding. This act also authorized reconstruction of a channel stabilization dam in Cahokia Creek diversion channel to provide protection to adjacent levees and bridges from scour and eventual loss. Post authorization studies in the early 1980's justified a project that was constructed for the Blue Waters Ditch area, which included channel improvements and a pumping station with a final project cost of \$11,530,000 and \$2,950,000 non-Federal. However, flood plain detention areas, the reservoir on Little Canteen Creek and other related flood control measures in the Cahokia-Harding Ditch Area are not economically feasible.

Severe flooding, which has resulted in National Disaster Declarations each year from 1993 to 1996, resulted in a new Congressional appropriation in FY1997 to restart a cost-shared general reevaluation of the interior area. Congress added funds each year since FY1997 to continue this effort. The project has been reformulated as an ecosystem restoration project that provides incidental flood damage reduction. Preparation of the general reevaluation report continued in FY03. Project costs are estimated to be \$210 million. The 1988 Energy and Water Development Appropriations Act authorized repair and rehabilitation of pump stations and appurtenant works, channels and bridge structures. The estimated total cost of this work (2002) is \$38,946,000 Federal and \$16,465,000 Non-Federal.

Local cooperation. For work under the Energy and Water Development Appropriations Act of 1988, PL 100-202, local interests have entered into three Local Cooperation Agreements (LCA) which cover all of the work in the Flood Protection Rehabilitation project. Construction work under the first two LCAs is complete, and construction work under the third LCA is underway. In May 1998, a PED agreement was executed by the local interests to cover costs associated with the reevaluation of the Cahokia-Harding Ditch area.

Operations and results during fiscal year. Construction was completed on Canteen Creek Phase II and North and East pump station repairs.

12. MERAMEC RIVER BASIN (VALLEY PARK), MISSOURI

Location. The project is located in St. Louis County, Missouri, adjacent to the left bank of the Meramec River between miles 20.7 and 22.1 above the confluence with the Mississippi River.

Existing project. The project was authorized for construction by Section 2(h), Public Law 97-128, Dec. 29, 1981, and the Water Resources Development Acts of 1986 and 1999. It protects Valley Park from the 100-year flood on the Meramec River. The project includes 3.2 miles of earthen levee with six gravity drains, three closure structures, interior ponding areas and 41 relief wells required for under-seepage control. Estimated total project cost (2003) \$49,295,000; \$36,967,000 Federal, and \$12,328,000 non-Federal.

Local cooperation. The city of Valley Park, Missouri is the local sponsor. A Local Cooperation Agreement was executed on August 12, 1992.

Operations and results during fiscal year. The project is about 80 percent complete; 1.6 miles of levee and 3 closure structures have been completed. The remaining 1.6 miles of levee (which includes two "engineered fills" for material from the ruins from an abandoned glass plant) is under construction.

13. NUTWOOD DRAINAGE AND LEVEE DISTRICT, IL

Location. The levee district is in Green and Jersey Counties, IL, on the left bank of the Illinois River between miles 15.2 and 23.7 above the Mississippi River. (See Quincy, IL-MO, sheet of maps of the United States, published by Army Map Service, scale 1:250,000.)

Existing Project. Project was authorized by the 1962 Flood Control Act (H. Doc. 472, 87th Cong., 2d sess.). Project provides for raising and enlarging 11.4 miles of levee, construction of 1.0 miles of new levee, altering a pumping station and construction of seepage control measures. This project would provide protection to 10,360 acres of land, 9,365 of which are highly productive agricultural lands. A General Design Memorandum (GDM), completed in 1986, indicated that the plan was not economically justified at the interest rate used at the time. The project was declared inactive on Jun. 3, 1987. As a result of the Great Flood of 1993 and the inundation of Illinois State Highway 16/100 within the project area, the 1995 Energy and Water Development Appropriations Bill included funding to perform a flood damage reduction study.

Local Cooperation. Requirements of local cooperation are described on page 14-11 of FY 1980 Annual Report except that cost sharing policies established by the Water Resources Development Act of 1986, PL-99-662, will also apply. The Nutwood Drainage and Levee District is the local sponsor. The cost sharing agreement for preconstruction engineering and design (PED) was executed in July 1997.

Operations and results during fiscal year. Construction funding was received in FY 2002. Work efforts to acquire necessary permits and prepare plans and specifications continued in FY 04. The present total Federal project cost (Oct 03) is \$12,043,000; non-Federal cost is \$4,015,000.

14. RIVER DES PERES, MO

Location. River des Peres drains a 111-square mile area in the city of St. Louis and St. Louis County, Missouri, and empties into the Mississippi River.

Existing project. The project was authorized by the Water Resources and Development Act of 1990 (PL 101-640). The authorized project consists of two subprojects, Deer Creek and University City. The Deer Creek portion consists of 2.5 miles of channel widening and stabilization improvements through the cities of Rock Hill, Webster Groves, Brentwood, and Maplewood. The University City portion consists of channel enlargement and stabilization along about 2.5 miles of the University City branch of upper River des Peres, a 2.53-mile recreation trail, and a small recreation park to be constructed by non-Federal interests on non-project lands.

Local cooperation. The Metropolitan St. Louis Sewer District (MSD) and the mayors of Brentwood, Rock Hill, Webster Groves, and Maplewood signed a

Design Agreement on May 17, 2001, to serve as the local sponsors for the Deer Creek portion of the project. The Deer Creek portion is currently deferred as the cities of Rock Hill and Brentwood withdrew their support in FY 03. The city of University City signed a Design Agreement in FY 04.

Operation and results during fiscal year. Initiated the General Reevaluation for the University City portion of the project.

15. ST. LOUIS FLOOD PROTECTION, MO

Location. The St. Louis Flood Protection project is located in St. Louis, Missouri, on the right bank of the Mississippi River between miles 176.3 and 187.2 above the mouth of the Ohio River.

Existing project. The project was authorized by Public law 84-256, Aug. 9, 1955, and was completed in 1974. The reevaluation of the project consists of analyzing possible structural deficiencies and geotechnical concerns and the enhancement of recreation features within the project area.

Local cooperation. The city of St. Louis signed the Design Agreement on Feb. 2, 2000.

Operations and results during fiscal year. Completed draft reconstruction evaluation in September 2004; the report recommends Federal participation.

16. STE. GENEVIEVE, MO

Location. The City of Ste. Genevieve is located in Ste. Genevieve County at the edge of the Mississippi River floodplain about 54 miles south of St. Louis, MO.

Existing project. The project was authorized by the Water Resources Development Act of 1986 (PL 99-662). The authorizing language states "Congress finds that, in view of the historic preservation benefits resulting from the project, the overall benefits of the project exceed the costs of the project." The overall project consists of four parts. Part 1 is a major levee and associated features that will protect the town from the Urban Design Flood on the Mississippi River. Parts 2 and 3 are channel improvements on tributary streams that flow through the town, North and South Gabouri Creek, respectively. Part 4 is recreation features on flood control lands. Estimated total project cost (2003) is \$50,174,000; \$36,167,000 Federal, and \$14,007,000 is non-Federal.

Local cooperation. The project sponsor is the Ste. Genevieve Joint Levee Commission. The City of Ste. Genevieve, Ste. Genevieve County Levee District Number 2, and Ste. Genevieve County Levee District Number 3 hold membership on the Commission.

Operations and results during fiscal year. The Corps of Engineers and the project sponsor have essentially completed Part 1 and are reformulating the plans for Parts 2, 3, and 4.

17. WOOD RIVER DRAINAGE AND LEVEE DISTRICT, IL

Location. The Wood River Drainage and Levee District project is located in the Mississippi River floodplain of Madison County, Illinois, just upstream of the city of St. Louis.

Existing project. The project was authorized by the Flood Control Act of 1938 and modified by the Flood Control Act of 1965. The original project provided for local flood protection works. The modified project provides for a pumping station with collector ditches and necessary appurtenant facilities for removal of water impounded by the existing levees. The pump station was never built.

Local cooperation. The Wood River Drainage and Levee District signed a Design Agreement in May 2000.

Operations and results during fiscal year. Continued plans and specifications.

18. WOOD RIVER LEVEE, IL

Location. The Wood River Levee project is located in the Mississippi River floodplain of Madison County, Illinois, just upstream of the city of St. Louis.

Existing project. The project was authorized by the Flood Control Act of 1938 and constructed in the 1950s. The existing project provides urban level protection for the 500-year Mississippi River flood stage. A reconstruction evaluation is underway to address the aging infrastructure and determine Federal interest. The recommended project includes the rehabilitation of the levee system to bring it into original performance compliance.

Local cooperation. The Wood River Drainage and Levee District signed a Design Agreement on Apr. 6, 2000.

Operations and result during fiscal year. Continued the reconstruction evaluation.

19. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Inspection of completed work was accomplished at a cost of \$421,419 for Fiscal Year 2004. Total cost as of end of fiscal year is \$13,133,761.

20. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood control activities pursuant to Sec. 205, Public Law 858, 80th Cong., as amended (preauthorization).

See Table 14-F.

Emergency bank stabilization activities pursuant to Sec. 14, Public Law 526, 79th Cong., as amended.

See Table 14-F.

Emergency flood control activities - repair flood fighting, and rescue work (Public Law 99, 84th Cong., and antecedent legislation).

Federal costs for the fiscal year were \$388,913 for Disaster Preparedness, \$25,248 for Emergency Operations, and \$7,276 for Rehabilitation.

Miscellaneous

21. ECOSYSTEM RESTORATION WORK UNDER SPECIAL AUTHORIZATION

Project Modifications for improvement of environment pursuant to Sec. 1135, Public Law 99-662, as amended (preauthorization).

During FY 04, the following funds were expended: \$475 Coordination Account; \$106 Preliminary Restoration Plan; \$721,226 Rend City Wetlands Restoration; \$65,628 Spunky Bottoms; and \$37,204 Shelbyville Wildlife Management Area.

Aquatic Ecosystem Restoration Public Law 104-303, Sec. 206.

In FY 04, funds were expended as follows: \$5,025 Coordination Account; \$40,037 Confluence Greenway; \$29,055 Ted Shanks Area Reforestation; \$20,549 Lemay Wetland Restoration; \$39,422 Horseshoe Lake Restoration; \$28 Gabaret Island Ecosystem

Restoration; \$60,306 North Chutes Area Restoration; and \$379 Forest Park.

Multiple-Purpose Project Including Power

22. GENERAL REGULATORY FUNCTIONS

Permit Evaluations	\$1,501,510
Enforcement	83,381
Studies	21,944
Environmental Inspection Statement	14,141
Appeals	6,973
Compliance and Mitigation	78,499
Total Regulatory	\$1,706,448

23. CATASTROPHIC DISASTER PREPAREDNESS PROGRAM

Local Preparedness	\$ 9,671
National Preparedness	35,191
National Emergency Facilities	0
Readiness Training	0
Total	\$44,862

24. OTHER PROGRAMS AND ACTIVITIES

In FY 04, \$1,443,304 was expended on Native American Grave Protection for operation and maintenance.

25. UPPER MISSISSIPPI RIVER ENVIRONMENTAL MANAGEMENT PROGRAM

Location. The portion of the Upper Mississippi River within the boundaries of the St. Louis District extends from the mouth of the Ohio River (river mile 0) to river mile 300, downstream of Lock and Dam 22.

Existing project. The project is composed of five elements: Habitat Rehabilitation and Enhancement Projects, Long-term Resource Monitoring, Recreation Projects, Studies of Recreation Impacts and Navigation Traffic Monitoring. (The St. Louis District's involvement has been limited to Habitat Rehabilitation and Enhancement Projects and Long Term Resource Monitoring.) The overall program, involving five states and three engineer districts, is administered by the Mississippi Valley Division. In the St. Louis District, five habitat rehabilitation projects have been completed. These are Clarksville Management Area, Dresser Island, Pharris Island, and Stag Island in Missouri and Stump Lake in Illinois. Through FY 2003, funds allo-

cated to the St. Louis District have amounted to \$41,644,700 for design and construction of Habitat Rehabilitation and Enhancement Projects (HREP), \$2,308,200 for Long Term Resource Monitoring (LTRM), \$2,557,700 for Program Management; and \$967,800 for Habitat Needs Assessment.

During FY 04, expenditures of \$3,275,152 included the following:

Baseline Monitoring	\$ 19,601
Batchtown	494,512
Biological Response Monitoring	323,292
Calhoun Point	2,019,310
Dike Alterations	20,373
Establishment Chute	14,354
Habitat Needs Assessment	-1,080
Jefferson Barracks	1,872
Pools 25/26	2,176
Program Management	148,456
Project Coordination LTRM	18,529
Project Evaluation LTRM	147,775
Salt Lake/Ft. Chartres	10,296
Schenimann Chute	14,123
Stump Lake	3,554
Ted Shanks	12,961
US Fish & Wildlife Service Coordination	25,048

Local cooperation. The terms of local cooperation, as established by Public Law 99-662, will vary according to the nature of the project, land ownership and pre-existing management responsibilities. The local sponsor for Habitat Rehabilitation and Enhancement projects is usually the U.S. Fish and Wildlife Service in coordination with the state of Missouri or the state of Illinois. A PCA agreement with the state of Missouri was completed in FY 97 for the Cuivre Island project.

Operations and results during the fiscal year. During FY 2004, construction was ongoing on Calhoun Point Phase I, and Calhoun Point Phase II construction contract was awarded. Design continued on the final phase of Batchtown (Phase III). Habitat and biological response monitoring activities continued on numerous projects in Missouri and Illinois.

26. FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP)

On October 13, 1997, Congress transferred the management of the Formerly Utilized Sites Remedial Action Program (FUSRAP) to the Corps of Engineers, via the Energy and Water Development Appropriations Act, 1998. The St. Louis District was chosen to remediate low-level radioactive contamination, which

resulted from activities conducted by the Manhattan Engineer District/Atomic Energy Commission, at the five St. Louis area sites. These sites include the Madison Site in Madison, Illinois, Hazelwood Interim Storage Site (HISS)/Latty Avenue Vicinity Properties (VPs), St. Louis Airport Site (SLAPS), St. Louis Airport Site Vicinity Properties (SLAPS VPs), and St. Louis Downtown (SLDS), in St. Louis, Missouri. A sixth site, the Iowa Army Ammunition Plant (IAAAP), was declared eligible for inclusion in FUSRAP in FY 01. Cleanup will follow the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act.

In FY 04, 114,775 cubic yards of material were disposed of from the Missouri sites. The Corps of Engineers continued its remediation efforts at SLDS under the approved Record of Decision. Remediation continued at the Mallinckrodt Plant and was undertaken in the City of Venice in support of the McKinley Bridge replacement project. The Corps issued the Five-Year Review Report, the North County Haul Roads Assessment, and the draft final Record of Decision for North County.

TABLE 14-A COST AND FINANCIAL STATEMENT

See Section in Text	Project	Funding	FY 01	FY 02	FY 03	FY 04	Total Funds to Sep. 30, 2004
4.	Mississippi River Between Ohio and Missouri Rivers (Includes Chain of Rocks original project and deficiency corrections)	New Work					
		Approp.	6,437,000	3,613,000	1,670,700	1,312,900	\$272,600,174 ¹
		Cost	5,784,758	4,284,721	1,666,730	1,315,103	272,313,682 ¹
		Approp.	13,480,719	18,098,861	24,293,500	15,681,000	490,854,201 ²
		Cost	13,299,366	15,955,383	25,165,997	16,808,310	490,489,587 ²
7.	Alton to Gale Organized Levee Districts, IL & MO	New Work					
		Approp.	2,130,000	856,000	62,400	800	11,908,200
		Cost	930,417	2,055,705	62,386	787	11,908,049
	(Contrib. Funds)	New Work					
		Approp.	0	0	0	0	143,750
		Cost	0	16,416	0	8	116,719
9.	Cape Girardeau, Jackson, MO	New Work					
		Approp.	2,219,000	2,634,000	150,000	51,000	35,406,000
		Cost	2,197,980	2,685,687	150,932	50,132	35,405,034
	(Contrib. Funds)	New Work					
		Approp.	344,000	220,000	260,000	18,000	3,157,759
		Cost	130,660	331,982	238,169	134,143	3,149,156
11.	East St. Louis and Vicinity, IL	New Work					
		Approp.	1,079,000	186,000	1,539,900	602,000	49,613,226 ³
		Cost	1,105,629	278,956	1,546,425	596,472	49,604,721 ⁴
	(Contrib. Funds)	New Work					
		Approp.	100,765	250,000	0	0	8,315,200
		Cost	62,391	11,024	256,761	62,013	8,264,843
	East St. Louis and Vicinity (Ecosystem Restoration and Flood Damage Reduction), IL	New work					
		Approp.	370,000	567,000	507,100	117,000	3,031,100
		Cost	330,832	632,394	509,910	115,425	3,029,508
	(Contrib. Funds)	New Work					
		Approp.	50,000	254,000	180,000	45,000	939,000
		Cost	192,517	8,416	319,561	110,238	891,768
12.	Meramec R. Basin, Valley Park, MO	New Work					
		Approp.	1,909,000	73,000	1,623,100	4,218,500	24,484,600
		Cost	1,948,177	178,289	1,644,978	4,212,104	24,478,185
	(Contrib. Funds)	New Work					
		Approp.	300,000	500,000	-378,000	178,000	1,707,058
		Cost	300,000	401,922	-279,930	178,008	1,707,058
8.	Bois Brule, MO (Design Deficiency)	New Work					
		Approp.		1,200,000	199,000	912,500	2,311,500
		Cost		797,310	452,060	949,582	2,198,952

TABLE 14-A **COST AND FINANCIAL STATEMENT**
(Continued)

See Section in Text	Project	Funding	FY 01	FY 02	FY 03	FY 04	Total Funds to Sep. 30, 2004
13.	Nutwood Drainage and Levee District, IL	New Work					
		Approp.	0	121,000	124,300	117,000	362,300
		Cost	0	120,735	124,504	116,853	362,093
	(Contrib. Funds)	New Work					
		Approp.	0	0	0	0	0
		Cost	0	0	0	0	0
16.	Ste. Genevieve, MO	New Work					
		Approp.	2,284,000	1,659,000	310,700	158,900	25,957,600
		Cost	2,329,106	1,713,540	333,701	160,703	25,957,139
	(Contrib. Funds)	New Work					
		Approp.	306,605	-13,588	-62,530	0	6,551,650
		Cost	403,243	-7,346	7,535	66,987	6,549,284
26.	FUSRAP (Total)	New Work					
		Approp.	60,179,000	52,480,000	52,884,000	50,100,000	463,436,000
		Cost	60,160,402	52,563,423	53,059,736	49,988,571	462,531,423
	Madison	New Work					
		Approp.	80,000	0	0	0	2,284,000
		Cost	60,912	51,839	10,598	-7,768	2,231,379
	Latty Avenue	New Work					
		Approp.	11,397,000	4,373,000	1,930,000	1,893,000	63,955,000
		Cost	11,427,731	4,379,910	1,969,028	1,873,909	63,810,323
	St. Louis Airport	New Work					
		Approp.	29,044,000	31,111,000	37,043,000	36,466,000	229,756,000
		Cost	28,981,853	31,099,607	37,136,346	36,384,129	229,458,037
	St. Louis Airport & Vic. Properties	New Work					
		Approp.	1,863,000	1,670,000	1,575,000	1,602,000	39,739,000
		Cost	1,787,194	1,762,701	1,582,424	1,599,877	39,626,503
	St. Louis Downtown	New Work					
		Approp.	17,720,000	15,316,000	12,286,000	9,889,000	127,077,000
		Cost	17,815,195	15,233,812	12,350,147	9,906,413	126,840,875
	Iowa Army Ammunition Plant	New Work					
		Approp.	75,000	10,000	50,000	250,000	425,000
		Cost	85,547	35,553	11,195	232,012	364,306
	Oakridge Transition	New Work					
		Approp.	0	0	0	0	200,000
		Cost	1,969	0	0	0	200,000

1. Excludes previous project cost of \$1,416,620.

2. In addition \$1,139,000 was expended for rehabilitation.

3. Includes \$8,072,326 for work authorized by Flood Control Act of 1965.

4. Includes \$7,921,939 for work authorized by Flood Control Act of 1965.

5. Excludes previous project cost (prior to FY97) of \$15,632,925.

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TABLE 14-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Nov. 28, 1990	Modified to provide construction of cost-shared recreation facilities within the state of Illinois	Public Law 101-640, 101st Cong.
Oct. 31, 1992	Modified to allow cost-shared recreation with other non-Federal interests and authorized a 24,000 square foot visitor center.	Public Law 102-580, 102nd Cong.
Oct. 12, 1996	Amended project for recreation to include other contiguous nonproject lands, including those referred to as the Alton Commons.	Public Law 104-303
1960 River and Harbor Act as amended. Section 107	SOUTHEAST MISSOURI PORT, MO Construct harbor channel with adjacent landfill.	
Nov. 26, 1986	ST. LOUIS HARBOR, MO & IL (See Section 5 of Text) As outlined in the Report of the Chief of Engineers, dated Apr. 30, 1984, the Water Resources Development Act of 1986 authorizes navigation improvements.	Public Law 99-662 99th Cong., 2d sess.
Oct. 12, 1996	The Secretary shall complete a limited reevaluation of the authorized St. Louis Harbor Project in the vicinity of the Chain of Rocks Canal, Illinois, consistent with the authorized purposes of that project, to include evacuation of waters collecting on the land side of the Chain of Rocks Canal East Levee	Public Law 104-303
Jun. 22, 1936	ALTON TO GALE ORGANIZED LEVEE DISTRICTS, IL & MO (See Section 7 of Text) Authorized construction of levees to protect area from flooding from the Mississippi River.	Special report on record in OCE Flood Control Committee Doc. 1, 75th Cong., 1st sess.
Jun. 28, 1938 1946		
Nov. 17, 1986	CAPE GIRARDEAU, JACKSON METROPOLITAN AREA, MO (See Section 8 of Text) As outlined in the Report of the Chief of Engineers dated Dec. 8, 1984, the Water Resources Development Act of 1986 authorizes flood control and related recreational improvements in the Cape La Croix Creek Watershed.	Public Law 99-662, 99th Cong., 2d sess.
Oct. 12, 1996	As outlined in the Report of the Chief of Engineers, dated July 18, 1994, the Water Resources and Development Act of 1996 authorizes construction, including nonstructural measures, at a total cost of \$45,414,000 (\$33,030,000 Federal; \$12,384,000 non-Federal)	Public Law 104-303, 104th Congress
Dec. 11, 2000	CHESTERFIELD, MO (See Section 9 of Text) Authorized for construction, subject to completion of a favorable Chief of Engineers Report by Dec. 31, 2000. (Report was signed Dec. 29, 2000.)	Public Law 106-541 106th Congress

14-14

TABLE 14-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Dec. 29, 1981	Undertake structural and nonstructural flood control measures.	Public Law 97-128, 97th Cong. Amended Section 1128, Public Law 99-662, 99th Cong.
Aug. 17, 1999	Modified to authorize construction at a maximum Federal expenditure of \$35,000,000	Public Law 106-53, 106th Cong., 1st sess.
Dec. 1, 2003	Modified to authorize construction at a maximum Federal expenditure of \$50,000,000.	Public Law 108-137 108 th Cong., 1 st sess.
Oct. 23, 1962	MC GEE CREEK DRAINAGE AND LEVEE DISTRICT, IL Reconstruct existing levee and construct pumping plant to reduce flooding.	H. Doc. 472, 87th Cong., 2d sess.
Oct. 23, 1962	MEREDOSIA LAKE AND WILLOW CREEK DRAINAGE AND LEVEE DISTRICT, IL Raise and enlarge existing levee and other modifications.	H. Doc. 472, 87th Cong., 2d sess.
Oct. 23, 1962	NUTWOOD DRAINAGE AND LEVEE DISTRICT, IL (See Section 12 of Text) Raise and enlarge existing levee and other modifications.	H. Doc. 472, 87th Cong., 2d sess.
Oct. 23, 1962	REND LAKE, BIG MUDDY RIVER, IL Construct dam at Benton, IL, and subimpoundment dams on upper arms of reservoir.	H. Doc 541, 87th Cong., 2d sess.
Nov. 28, 1990	RIVER DES PERES, MO (See Section 13 of Text) As outlined in the report of the Chief Engineers dated May 23, 1989, the Water Resources Development Act of 1990 authorizes flood control.	Public Law 101-640 101st Cong.
Aug. 9, 1955	ST. LOUIS FLOOD PROTECTION, MO (See Section 14 of Text) Construct flood control improvements.	Public Law 84-256 84th Cong.
Nov. 17, 1986	STE. GENEVIEVE, MO (See Section 15 of Text) As outlined in the Report of the Board of Engineers for Rivers and Harbors dated Apr. 16, 1985, the Water Resources Development Act of 1986 authorizes construction of a levee and a pumping plant to protect the city from Mississippi River and Gabouri Creek floods.	Public Law 99-662, 99th Cong., 2d sess.
Jun. 28, 1938	WOOD RIVER DRAINAGE AND LEVEE DISTRICT, IL (See Section 16 of Text) Construct reservoirs and local protection projects.	Flood Control Committee Doc. 1, 75th Cong., 1st sess.
Oct. 27, 1965	Authorized substantially as recommended by the Chief of Engineers.	H. Doc 150 88th Cong.

TABLE 14-B
(Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Jun. 28, 1938	WOOD RIVER LEVEE, IL (See Section 17 of Text) Construct reservoirs and local protection projects.	Flood Control Committee Doc. 1, 75th Cong, 1st sess.
Oct. 23, 1962	CLARENCE CANNON DAM AND RESERVOIR, SALT RIVER, MO Modified act of Jun. 28, 1938 by deleting the reservoir therefrom and reauthorizing it as a separate multiple-purpose project.	H. Doc. 507, 87th Cong., 2d sess.
Oct. 27, 1965	Changes name of project from Joanna Dam to present designation.	Public Law 89-298, 89th Cong.
Oct. 13, 1997	Formerly Utilized Sites Remedial Action Program (FUSRAP) (See Sec. 25 of text.) Carry out remediation at five St. Louis Area sites - Madison, Illinois, Latty Avenue, St. Louis Airport, St. Louis Airport and Vicinity Properties, and St. Louis Downtown, MO.	Energy and Water Development Approp. Act of 1998

1. Also joint resolution, Jun. 29, 1906.
2. Inactive.
3. All work completed.

TABLE 14-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
		Construction	Operation and Maintenance	
Cuivre River, MO ¹	1883	\$ 12,000	\$ --	--
Kaskaskia River, IL ²	1989	147,387,000	41,881,399	1988
Moccasin Springs, MO	1969	76,436 ³	--	--
Southeast Missouri Port, MO	1993	3,466,522	2,872,989	Apr. 89
Wabash Railroad Bridges, Illinois River, Meredosia, and Valley City, IL	1961	2,653,194	1961	--

1. Inactive. River declared nonnavigable by act of Mar. 23, 1900.

2. Excludes \$10,461 expended on previous project.

3. Excludes \$56,605 contributed funds.

TABLE 14-D **OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
		Construction	Operation and Maintenance	
Clarence Cannon Dam and Reservoir, Salt River, MO	1996	313,180,128	108,861,681	--
Cache River Diversion, IL	1953	2,837,114	--	1953
Cape Girardeau, MO, No. 2	1965	5,157,805	--	1964
Carlyle Lake, IL	1981	42,819,400	117,802,857	Oct. 1976
Chouteau, Nameoki, and Venice Drainage and Levee District, IL	1955	185,700	--	1955
Columbia Drainage and Levee District No. 3, IL	1981	2,818,000	--	Aug. 1981
Degognia and Fountain Bluff Levee and Drainage District, IL	1959	5,889,500	--	1959
Dively Drainage & Levee District, IL	1976	1,720,000	--	1976
Emergency bank protection for certain highway and railroad facilities at Price Landing, MO (see Flood Control Act of 1944) ¹	1950	55,415	--	Oct. 1949
Emergency repairs to levees on Mississippi, Illinois, and Kaskaskia Rivers and flood fighting and rescue work (Sec. 5, Flood Control Act of 1941, as amended) ¹	1953	--	--	1951
Emergency protection for certain highway and railroad facilities at Chester, IL, bridge (Sec. 12, Flood Control Act of 1944)	1952	50,000	--	Jan. 1952
Emergency protection for Illinois approach, Chain of Rocks Bridge (Sec. 12, Flood Control Act of 1944)	1946	25,000	--	Aug. 1945
Fort Chartres and Ivy Landing Drainage District No. 5, IL	1970	1,154,800	--	1958
Grand Tower Drainage and Levee District, IL	1959	4,677,900	--	1959
Harrisonville Levee and Drainage District, IL	1981	6,829,069	--	Mar. 1981
Kaskaskia Island Drainage and Levee District, IL	1959	297,460	--	1949
Lake Shelbyville, IL	1981	44,000,000	121,725,035	Sep. 1978
Mauvaise Terre Drainage and Levee District, IL	1989	589,000	--	1988
McGee Creek Drainage and Levee District, IL	1989	25,043,300	--	1989
Meredosia Lake and Willow Creek Drainage and Levee District, IL	1944	249,738	--	1944
Miller Pond Drainage District, IL	1955	164,183	--	1955

TABLE 14-D
(Continued)

**OTHER AUTHORIZED FLOOD
CONTROL PROJECTS**

Project	For Last Full Report See Annual Report For:	Cost to Sep. 2004		Mo. and Yr. Completed
		Construction	Operation and Maintenance	
Mississippi River Agricultural Area 8, MO	1987	2,137,000	--	--
Mississippi River at St. Louis, MO	1980	79,265,166	--	Jan. 1980
Mississippi River, Alton to Gale, IL, underseepage measures	--	85,422	--	Oct. 1962
North Alexander Drainage and Levee District, IL	1957	939,569	--	1957
Nutwood Drainage and Levee District, IL	1989	670,000	--	1984
Perry County Drainage and Levee ² District Nos. 1, 2, and 3, MO	1987	7,968,700	--	1986
Pine Ford Lake, MO	1996	3,644,000	--	-
Prairie du Pont Levee and Sanitary District, IL ³	1970	6,005,127	--	1970
Prairie du Rocher and vicinity, IL	1959	3,882,600	--	1959
Preston Drainage and Levee District, IL	1959	1,866,910	--	1959
Rend Lake, Big Muddy River, IL ^{4,5}	1989	43,700,900	94,056,983	1988
Strington, Ft. Chartres, and Ivy Landing, IL	1957	2,123,700	--	Aug. 1956
Urban areas at Alton, IL	1960	192,000	--	--
Village of New Athens, IL	1981	1,983,000	--	Sep. 1981
Valley City Drainage & Levee District, IL ⁶	1967	91,952	--	1967
Wood River Drainage and Levee District, IL ⁷	1989	17,163,821	--	1988

1. Work complete, now performed under Public Law 99.

2. Excludes \$6,800,700 for previous project.

3. Includes \$5,235,927 for previous project.

4. Excludes \$550,000 Area Development Administration Funds allotted to the State of Illinois for increased construction costs of Interstate Highway 57 to meet project requirements, and excludes \$449,093 Area Redevelopment Administration Funds allotted to the Corps.

5. Includes \$6,103,711 credit to State of Illinois for work in kind.

6. Authorized by Chief of Engineers (Sec. 205, 1948 Flood Control Act, as amended).

7. Funds are for work authorized by Flood Control Act of 1938.

TABLE 14-E DEAUTHORIZED PROJECTS

Project	Report For	For Last Full Report See Annual Authority	Date And Expended	Federal Funds Exp	Contrib Funds
Angler-use sites, Meramec Basin, MO		1967	WRDA 1986 Oct 86	--	--
Big Swan D&L District Illinois River, IL		--	WRDA 1986 Oct 86	--	--
Cape Girardeau, MO Reaches Nos 1, 3, and 4		1959	Oct 78	\$ 22,000	--
Clear Creek Drainage and Levee District, IL		1964	PL 100-676 Jan 90	4,984,500	--
East Cape Girardeau and Clear Creek D&L District, IL		1963	PL 100-676 Jan 90	1,920,600	--
Eldred, IL		1962	Nov 79	--	--
Fort Chartres & Ivy Landing D&L District No. 5 and Stringtown Drainage and Levee District No. 4, IL		1971	WRDA 1986 Oct 86	--	--
Grafton Small Boat Harbor, IL		1962 ¹	Nov 77	--	--
I-38 Lake, MO			PL 100-676 1 Jan 1990	--	--
Indian Creek Area Illinois River, IL		--	Nov 81	--	--
Irondale Lake, MO			PL 100-676 1 Jan 1990	--	--
Keach Drainage and Levee District, IL		--	WRDA 1986 Oct 86	--	--
Levee Districts between Carlyle and New Athens, IL, Nos. 2, 5, 6 and 7		1979	Nov 79	--	--
Levee Districts between Carlyle and New Athens, IL Nos. 3, 4, 8, 10 and 13		1979	Nov 79	--	--
Levee Districts between Cowden and Vandalia, IL		1978	Oct 78	496,000	--
Meramec Park Lake, MO			Dec 81	37,682,514	--
Mississippi River Agricultural Area No. 10, MO		1967	Nov 79	--	--
Mississippi River Agricultural Area No. 12, MO		1967	WRDA 1986 Oct 86	--	--
Mississippi River at Alton, IL					
Small Boat Harbor		1958 ¹	Nov 77	--	--
Preston Drainage and Levee District, IL		1959	PL 100-676 1 Jan 1990	1,866,910	--
Richland Creek, IL		1969	PL 100-676 10 Aug 89	401,000	--
Riverland Levee District, MO		1936	Aug 77	--	--
Scott County D&L District Illinois River, IL		--	WRDA 1986 Oct 86	--	--
Small Boat Harbor opposite Chester, IL 1954 ¹			Nov 77	--	--
Small Boat Harbor opposite Hamburg, IL 1950 ¹			Nov 77	--	--
Ste. Genevieve County Drainage and Levee District No. 1, MO 1936			Nov 77	--	--

¹ Year authorized.

TABLE 14-E
(Continued)**DEAUTHORIZED PROJECTS**

Project	Report For	For Last Full Report See Annual Authority	Date And Expended	Federal Funds Exp	Contrib Funds
St. Louis County Drainage and Levee District No. 1, MO		1936	Nov 77	--	--
Union Lake, MO		1979	PL 100-676 Jan 90	4,931,154	--
Wiedmer Chemical Drainage and Levee District, MO		1936	Nov 77	--	--

TABLE 14-G **ACTIVE GENERAL INVESTIGATIONS**
(96x3121)

Project	FISCAL YEAR COST		
	Federal Cost	Non-Federal	Total
SURVEYS (Category 100)			
<u>Flood Damage Prevention Studies (120)</u>			
Alexander and Pulaski Counties, IL-12217	<u>\$10,991</u>	<u>\$12,534</u>	<u>\$23,525</u>
Subtotal		\$10,991	\$12,534
\$23,525			
<u>Watershed Comprehensive Studies (150)</u>			
St. Louis Riverfront, MO & IL	<u>93,960</u>		<u>93,960</u>
Subtotal	\$93,960		\$93,960
<u>Miscellaneous Activities (170)</u>			
American Heritage Rivers Initiative-14410	106,899		106,899
Interagency Water Resources Development-14713	36,275		36,275
Review of FERC Licenses-53857	0		0
Special Investigations-17250	13,443		13,443
Waterfowl Management Plan-53904	<u>3,520</u>		<u>3,520</u>
Subtotal	\$160,137		\$160,137
<u>Coordination Studies with Other Agencies (180)</u>			
Coordination with Other Water Resources Agencies	0		0
PAS – Kaskaskia Riverbank Erosion	0	1,475	1,475
PAS – St. Louis County	1,245	393	1,638
PAS – Brooklyn Waterfront Development	425	3,532	3,957
PAS – East St. Louis Waterfront Development	23,499	-5,094	18,405
PAS – Chouteau Island Environmental Study	0	146	146
PAS – Pool 25, MO, Riparian Study	505	1,643	2,148
PAS – Dardenne Creek	<u>97,666</u>	<u>33,985</u>	<u>131,651</u>
Subtotal	\$123,340	\$36,080	\$159,420
TOTAL (Category 100)	\$388,428	\$48,614	\$437,042
COLLECTION AND STUDY OF BASIN DATA (Category 200)			
<u>Flood Plain Management Services (250)</u>			
Flood Plain Management Services (250)-82030, 82040, 82045, 83184, 83562	96,951		96,951
Hydrology Studies (260)-53820	<u>7,965</u>		<u>7,965</u>
TOTAL (Category 200)	\$104,916		\$104,916

TABLE 14-G **ACTIVE GENERAL INVESTIGATIONS**
(Continued) **(96x3121)**

Project	FISCAL YEAR COST		
	Federal Cost	Non-Federal	Total
PRECONSTRUCTION ENGINEERING AND DESIGN (Category 600)			
St. Louis Harbor, MO & IL-10184	\$ 55,057		55,057
Chesterfield, MO-10457	235,215	160,568	395,783
Wood River D&LD, IL-20180	1,541	97	1,638
River de Peres, MO-12638	27,759	5,512	33,271
Wood River Levee, IL-10524	115,462	23,750	139,212
St. Louis Flood Protection, MO-17360	<u>66,835</u>	<u>29,713</u>	<u>96,548</u>
TOTAL (Category 600)	\$501,869	\$219,640	\$721,509
GRAND TOTAL GENERAL INVESTIGATIONS	\$995,213	\$268,254	\$1,263,467

ROCK ISLAND, IL, DISTRICT

This district comprises most of the northern half of Illinois, portions of southern Wisconsin, southern and southwestern Minnesota, eastern and central Iowa, and northeastern Missouri, embraced in drainage basin of Mississippi River and its eastern and western tributaries between mile 300 (above mouth of Ohio River) and 614, and of its eastern tributaries only, between

Hamburg Bay, at mile 261 and 300. This district also includes the Illinois Waterway above mile 80 with its tributaries and drainage basins. The section of the Mississippi River between river miles 300 and 614 is included in the report on Mississippi River between Missouri River and Minneapolis, MN.

IMPROVEMENTS

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Navigation

1. ILLINOIS AND MISSISSIPPI CANAL, IL

Location. This canal extends for 75 miles from the Illinois River near LaSalle, IL, to the Mississippi River at Rock Island, IL. A feeder canal, 29 miles in length, extends from the summit level of the canal to the Rock River at Rock Falls, IL.

Existing project. See pages 1306-1308 of Annual Report for 1962 for details regarding project. The canal was constructed in the period 1892-1918. The canal has not been operated for navigation since June 1951 in accordance with Corps policy to discontinue operation of waterways affording little or no benefit to navigation. The River and Harbor Act of 1958 authorized the appropriation of \$2,000,000 for the purpose of placing the canal in proper condition for public recreational use and to convey and transfer the canal to the State of Illinois as part of the State park system.

The repair and modification program was initiated in 1961, and a number of canal features have been repaired or modified. In connection with this program, fee title of 1,062 acres and recreational flowage easements over 309 acres of land in Rock River at Rock Falls, formerly under navigation flowage easement, have been acquired. The State of Illinois accepted title to the canal as of August 1, 1970. The River and Harbor Act of 1970 authorized the additional appropriation of \$6,528,000 to be expended for the repair, modification, and maintenance of bridges, title transfer, modification or rehabilitation of hydraulic structures, fencing, clearing auxiliary ditches, and for the repair and modification of other canal property appurtenances.

The repair and modification work was underway until a suit was filed by three Illinois counties and their Commissioners of Highway against the Federal Government and the State in 1974 over maintenance of highway bridges crossing the canal. After the lawsuit was filed, further rehabilitation work by the Federal Government on the canal was suspended.

On November 4, 1981, the Corps of Engineers deposited \$3,722,572 with the Clerk of the U.S. District Court in Chicago in full satisfaction of the Court's judgment. These funds were used by the counties to complete rehabilitation work as directed in the court order. Rehabilitation work by the Federal Government in coordination with the state was resumed in 1984 with the remaining authorization expended in 1987.

The Water Resources Development Act of 1986 authorized an additional appropriation of \$8,472,000 to accomplish the work described in the 1970 River and Harbor Act.

The State of Illinois filed an additional lawsuit against the United States on July 6, 1987 in the U.S. Claims Court in the amount of \$8,472,572. In a preliminary decision on September 22, 1988, the court dismissed the claim for \$3,722,572. A settlement agreement between the State of Illinois and the United States was signed on November 14, 1991. The agreement provided that Illinois release all claims against the United States as stipulated in the claims court and that the United States provide \$4,750,000 to Illinois as reimbursement for previous repair work performed upon the canal bridges by Illinois. On December 16, 1991, the U.S. Claims Court entered a judgment for \$4,750,000 in favor of the State of Illinois. This judgment was paid in FY 92.

Once funds are received, principal work features to restore the canal to acceptable conditions consist of the repair or reconstruction of retaining walls, embankments, portions of the lock and dam structures, culverts, drainage ditches, and other related work features which the United States has maintained or has been obligated to maintain under previous agreements. These features are consistent with a Master Management Plan prepared by the Illinois Department of Conservation. NEPA documentation to assess remaining work items must be completed prior to initiation of construction.

Local cooperation. A revised Supplemental Agreement with all work items remaining was executed between the state of Illinois and the Federal Government in April 1996.

Operations during fiscal year. Operations and maintenance during fiscal year. There were no programmed dollars allotted for this project in FY 04.

2. ILLINOIS WATERWAY, IL AND IN

Location. Illinois River (entirely within State of Illinois), formed by confluence of Kankakee and Des Plaines River, flows southwesterly and enters the Mississippi River at Grafton, IL, about 38 miles above St. Louis. Illinois Waterway comprises Illinois River from its mouth to confluence of Kankakee and Des Plaines Rivers (273 miles), Des Plaines River to Lockport (18.1 miles) and Chicago Sanitary and Ship Canal and South Branch of Chicago River to Lake Street, Chicago (34.5 miles). Also from a point

12.4 miles above Lockport, IL, waterway comprises Calumet-Sag Channel and Little Calumet and Calumet Rivers to turning basin 5, near entrance to Lake Calumet (23.8 miles); and Grand Calumet River from junction to 141st Street, deep (lake) draft navigation (9 miles) and to Clark Street, Gary, IN (4.2 miles).

Previous projects. For details, see page 1945 of Annual Report for 1915 and page 1172 of Annual Report for 1932.

Existing project. See Table 23-K and page 1255 of Annual Report for 1963. Cost of new work was \$124,041,436 and includes \$445,000 for Recreation Facilities under Code 711. Calumet-Sag Modification, Part III, placed in the deferred-for-restudy category in March 1972, cost of \$33,000,000 (July 1971) Federal and \$20,700,000 (July 1971) non Federal; is excluded from present cost estimate. Land acquired for the project consisted 909.407 acres in fee and 701.48 acres in easement. See Table 23-B for authorizing legislation.

(See Table 15-J through 15-N on existing locks and dams; lock and dam construction, foundations, cost; additional features entering into cost of project; existing project and total cost of existing project.)

Local cooperation. Complied with for completed modifications and Part I of Calumet-Sag Modification.

All pools above Alton Pool:

Maintenance: Maintenance: Channel dredging by Government Cutterhead Pipeline Dredge Dubuque was performed at various locations in LaGrange pool with a total of 56,800 cubic yards of material being removed. Mechanical dredging was performed in Brandon Road, Starved Rock, Peoria, and LaGrange pools for a total of 18,200 cubic yards of material being removed. The total cost of dredging was \$340,000. Continuing construction includes flood repairs to Peoria Lock and Dam storage building and work site; wicket lifter barge; and multi-site facility protection upgrades. Construction was initiated for the Sangamon Sediment Trap. Maintenance for the navigation function continued at a cost of \$8,425,451 (includes dredging costs). Maintenance of recreation features continued at a cost of \$32,238. Total costs for operation and maintenance were \$8,457,689. Net credits to the project were \$2,752; primarily as a result of collections from towboat companies for damages to lock and dam structures.

Operation and Care: Operations for navigation continued at a cost of \$12,914,377. Environmental Stewardship – Management of Natural Resources continued at a cost of \$38,941. Operations for the

Recreation Function continued at a cost of \$379,922. Total operation costs were \$13,333,240.

Total Operation and Maintenance costs were \$21,788,177.

Alton Pool Operation: Costs for the year were \$49,989 for lock operation; \$109,502 for water control management; \$63,630 for dredging activities; and \$63,900 for studies and surveys. Total operation costs were \$287,021.

Alton Pool Maintenance: Maintenance costs for the year totaled \$65,011, all for dredging.

Total operation and maintenance costs for all pools above Alton Pool were \$21,788,177. Alton Pool operation and maintenance costs were \$352,032. Total costs incurred were \$22,140,209.

3. ILLINOIS RIVER BASIN RESTORATION

Location: The project area is the Illinois River Basin defined as the Illinois River, Illinois, its backwaters, its side channels, and all tributaries, including their watersheds, draining into the Illinois River.

Existing Project: The purpose of the Illinois River Basin Restoration project is to develop a restoration program, long-term resource monitoring program, computerized inventory and analysis system, and innovative dredging technology and beneficial use of sediments to restore, preserve and protect the Illinois River Basin. This effort complements tasks being undertaken as part of the related Illinois River Ecosystem Restoration Feasibility Study, sponsored by the Illinois Department of Natural Resources. These efforts are part of the State's Illinois Rivers 2020 initiative, a proposed 20-year, \$2.5 billion, Federal-state effort to restore and enhance the Illinois River Basin. The project involves three districts (Rock Island, St. Louis, and Chicago).

A major initial focus is work on Critical Restoration Projects. Restoration of the Illinois River Basin requires the identification and implementation of projects, within the watershed and along the course of the river that repair past and ongoing ecological damage so that a more highly functioning, self-regulating ecosystem can develop within the existing basin context. Critical Restoration Projects will produce immediate habitat and sediment reduction benefits; will help evaluate the effectiveness of various restoration methods before application system wide; and make best

use of the current strong local and State interest in ecosystem restoration within the basin. The Corps of Engineers will implement these Critical Restoration Projects in collaboration with the non-Federal sponsor and other Federal and local agencies. Currently eight Critical Restoration Projects are in various states of completion. These projects include: Pekin Lake Northern Unit, Pekin Lake Southern Unit, Waubonsie Creek, Peoria Riverfront Development, Blackberry Creek, Kankakee River, Iroquois River, and McKee Creek.

Critical Restoration Projects: Have been initiated at 8 locations in the river basin.

Operations During Fiscal Year: Completed Draft Comprehensive Plan for Basin, Completed Critical Restoration Project Feasibility At Pekin Lake Southern Unit and Waubonsie Creek in FY 2003 and initiated design at Waubonsie Creek in July 2004. Expenditures during FY 04 totaled \$370,094.

4. MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS, MN

For report on this improvement, see chapter on "Mississippi River between Missouri River and Minneapolis, MN."

5. UPPER MISSISSIPPI - ILLINOIS NAVIGATION STUDY

Location. The study includes both the Upper Mississippi River and the Illinois Waterway. The study area covers over 850 miles of navigable waterways and 29 locks and dams of the Upper Mississippi River from the headwaters at St. Anthony Falls near Minneapolis-St. Paul, Minnesota; downstream to the mouth of the Ohio River at Cairo; and the Illinois Waterway (eight locks and dams) from Lake Michigan in Chicago, Illinois, southwest to where the waterway joins with the Mississippi River at Grafton, Illinois, 348 miles long. The Upper Mississippi River system meanders through the states of Minnesota, Wisconsin, Iowa, Illinois, and Missouri, and over 40 counties. The Illinois Waterway is located entirely within the State of Illinois.

Existing project. The Study has been restructured to give equal consideration of fish and wildlife resources and navigation improvement planning consistent with recommendations from the National Research Council and the Federal Principals Group. The restructured study is addressing the navigation efficiency needs of the UMR-IWW system, the ongoing cumulative effects of navigation, and the ecosystem restoration needs with a goal of attaining an

environmentally sustainable navigation system. Undertaken by four Corps Districts (St. Paul, Rock Island, St. Louis, and New Orleans). The resulting study final recommendation includes a program of incremental implementation and comprehensive adaptive management to achieve the dual purposes of ecosystem restoration and navigation improvements. Its first costs are \$5.7 billion framework for Ecosystem Restoration and a \$2.6 billion for the navigation improvements. A detailed synopsis of this study and the final recommendation can be found at <http://www2.mvr.usace.army.mil/umr-iwwsns/>. The review of this completed project is authorized by Section 216, Flood Control Act of 1970, PL 91-611.

Local cooperation. None required.

Operations during fiscal year. FY 04 activities were centered around the identification of a recommended plan and release of DRAFT Feasibility Study Report for public review and comment. A series of public meetings were held in November 2003 to present the final alternative plans and record and respond to any concerns or questions raised by the public. Preparation and review of the feasibility report and Environmental Impact Statement was a primary focus of the FY 04 work. The formal ITR of the Draft documents began in Feb 2004 and concluded in August. The National Research Council review panel conducted two regional listening sessions to hear from the study team and stakeholders, and submitted their second report on the study in late October. The Draft Integrated Feasibility Report and Programmatic Environmental Impact Statement (PEIS) was submitted for a 3-month public review in early May. Public hearings were held in 7 regional locations and 1 in Washington, D.C. during June. The FINAL Integrated Feasibility Report and PEIS was submitted to MVD in early September with the Division Commanders notice released the first week of October. The Chief's Report was officially signed on 15 December 2004.

6. UPPER MISSISSIPPI RIVER SYSTEM ENVIRONMENTAL MANAGEMENT PROGRAM (USMRS-EMP), IL, IA, MN, MO, WI

Location. The project is authorized for those river reaches having commercial navigation channels on the Upper Mississippi River, Illinois River, Minnesota River, St. Croix River, and Kaskaskia River in the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin.

Existing project. The purpose of the UMRS-EMP as stated in the authorizing legislation is to ensure the coordinated development and enhancement of the Upper Mississippi River system, recognizing its several purposes. The program includes habitat rehabilitation and enhancement projects to counteract the effects of backwater sedimentation. Long-term resource monitoring will provide the means for more informed management of the UMRS. Also authorized was a study of the economic impacts of completed recreation, completed navigation traffic monitoring, and recreation projects (currently unfunded). The program was initiated in 1986 utilizing funds provided by PL 99-88, FY 1985 Supplemental Appropriation Act. PL 99-662, Water Resources Development Act of 1986, further defined the program and provided for a 10 year implementation period and was extended to 15 years by PL 101-640, Water Resources Development Act of 1990. The Water Resources Development Act of 1999, P.L. 106-53, amends the previous authority by deleting recreation as a project purpose; increasing annual appropriation limits available to the program; authorizing an independent technical advisory committee; requiring submission of a report to Congress on a 6 year cycle that evaluates programs, accomplishments, assesses systemic habitat needs, and identifies any needed changes to the Program authorization.

Local Cooperation: Local cooperation agreements are obtained for habitat projects for such projects not located on lands managed as a national wildlife refuge, within the meaning of Section 906(e) of the 1986 WRDA. WRDA 1999 establishes a cost sharing percentage of 35 percent for such projects.

Operations During Fiscal Year. Expenditures during the year totaled \$14,709,000. The majority of funds was expended on two primary program elements: habitat projects and long term resource monitoring. FY 04 funds were used for construction on 4 habitat projects and for design activities on 17 additional habitat Projects, as well as applied research and long term resource monitoring. Construction has essentially been completed on a total of 41 projects (with many multiple phases) since the program was initiated. Data collection, analysis of data and production of technical and special reports was continued by contract with the Upper Midwest Environmental Sciences Center in Lake Onalaska, WI. The first report to Congress detailing the programs activities since the programs inception was completed and was submitted to Congress in January 1998. The second report to Congress is currently under review. A Habitat Needs Assessment was submitted to Congress in Sep. 2000. This assessment addressed the ecosystem needs along the Environmental Management Programs' reaches of the Upper Mississippi River.

7. OTHER AUTHORIZED NAVIGATION PROJECTS

See Table 15-C.

Flood Control

8. CORALVILLE LAKE, IA

Location. Coralville Lake is formed by the Coralville Dam on the Iowa River, several miles upstream from Iowa City, Johnson County, IA, about 83 miles above the confluence of the Iowa River with the Mississippi River.

Existing project. See page 28-4, Annual Report for 1981, for project details. Construction began in July 1949 and the project has been in operation since February 1958. About 25,035.76 acres in fee of land were acquired and 3,673.113 acres in flowage easements. The project was modified to provide for construction of a highway bridge crossing the lake at the Mehaffey site, which was begun in June 1964 and completed in October 1966. See Table 15-B for authorizing legislation.

Operations during fiscal year. Maintenance repairs to the bulkheads were initiated and cost \$19,366. Routine operations and maintenance activities continued at a cost of \$2,810,993. Total operation and maintenance costs were \$3,010,359.

9. DES MOINES RECREATIONAL RIVER RIVER AND GREENBELT, IA

Location. The greenbelt area is located along both banks of the Des Moines River in central IA and extends from a point at which relocated U.S. Highway 92 crosses the Des Moines River near Harvey, upstream approximately 169 river miles to U.S. Highway 20, and includes portions of Fort Dodge, IA. It also includes the Corps' operated Lake Red Rock and Saylorville Lake projects.

Existing project. The project will include, but not be limited to: (1) the construction, operation, and maintenance of recreational facilities and streambank stabilization structures; (2) maintenance of all structures constructed before the date of authorization of this project (3) tree plantings, trails, vegetation, and wildlife protection and development for recreational purposes; and (4) the prohibition or limitation by the Secretary of the killing, wounding, or capturing at any time of any wild bird or animal in such areas as may be directed by the Secretary.

The authorization requires that an Advisory Committee be established for consultation with the Department of the Army consisting of 47 members; three Corps of Engineers appointees, one person from each incorporated municipality, two from each of the nine counties, and five from the State of Iowa. See Table 15-B for authorizing legislation. Twelve Federally-funded projects were completed under the Greenbelt authority prior to FY 02. Congress appropriated funds in FY 03 and FY 04 to resume development of Greenbelt projects. The Greenbelt Advisory Committee has recommended development of the following projects: Fort Dodge Riverfront and Trails; Des Moines Riverwalk; Simon Estes Amphitheater ADA Modifications (Des Moines); and Cordova Center on the Rock (Lake Red Rock, Marion County)

Local Cooperation. Cost-sharing Agreements will be executed for those projects not located at Lake Red Rock or Saylorville. Letters of assurance have been received for the cost-shared projects recommended for inclusion in the Greenbelt by the 2003 Annual Program Management Report.

Operations during fiscal year. FY 04 funds were used to continue coordination with the Advisory Committee, prepare design agreements to initiate planning studies at Des Moines, Fort Dodge, and Cordova Center at Lake Red Rock, prepare plans and specifications for Trail Segment 4b at Lake Red Rock and the Simon Estes Amphitheater ADA Modifications, and construct a pedestrian bridge for Trail Segment 4b at Lake Red Rock. Costs incurred in FY04 were \$1,723,477.

10. LOVES PARK, IL

Location. The Loves Park project is located in Winnebago County, IL on the northeast boundary of the city of Rockford, IL. Loves Park is 17 miles south of the Illinois-Wisconsin state line.

Existing project. The project provides 100-year flood protection along Loves Park Creek. Protection measures consist of 18,000 feet of channel improvements, two diversion structures, use of two existing lakes as storage reservoirs, and 3,100 feet of buried concrete pipe. The estimated project cost is \$30,400,000 including \$9,400,000 non-federal costs. See Table 15-B for authorizing legislation.

Local cooperation: The local cooperation agreement was executed on March 26, 1991.

Operations during fiscal year. FY 04 funds were used to continue construction of Stage 1B. Total costs incurred during FY 04 were \$1,329,252.

11. RED ROCK DAM AND LAKE RED ROCK, IA

Location. The site of this project is on the Des Moines River, chiefly in Marion County, but extending into Jasper, Warren, and Polk Counties. The dam is 142.9 miles above the mouth of the Des Moines River, which empties into the Mississippi River at mile 361.4 above the mouth of the Ohio River. The city of Des Moines lies northwesterly from the site, about 60 miles upstream.

Existing project. See page 28-6, Annual Report for 1981 for description of the project. Construction began in May 1960, and the dam was placed in beneficial use for storage of flood water in January 1969. Land acquired for the project consisted of 50,207.860 acres in fee and 26,353.645 acres in flowage easement. Landowner complaints, that lake operation have flooded their lands more frequently than what they were told to expect when flowage easements were initially acquired, led Congress to modify the project authorization. Language in PL 99-190 authorizes acquisition from willing sellers fee simple title in real property, which is subject to periodic flooding in connection with the operation of the project. Potentially there are approximately 1,000 tracts consisting of about 30,000 acres. Estimated Federal cost is \$43,500,000. See Table 15-B for authorizing legislation.

Local Cooperation. None required.

Operations during fiscal year. Maintenance repairs to the Southeast Des Moines levees were completed; repairs to the Marina Cove Sanitary Facilities were completed; and the Rim Erosion Scope and Alternatives was initiated. These non-routine items cost \$447,114. Routine operations and maintenance activities continued at a cost of \$3,989,933. Total operations and maintenance costs were \$4,437,047.

12. SAYLORVILLE LAKE, IA

Location. The project site is chiefly in Polk County, IA, but portions extend into Dallas and Boone Counties. The dam is about 213.7 miles above the mouth of the Des Moines River and about 5 miles upstream from the city of Des Moines, IA.

Existing project. The dam is an earth embankment 6,750 feet long at crest with a height of 120 feet. Outlet works are a single circular concrete conduit, 22 feet in

diameter, located at the toe of the west bluff. Control structure is at upstream end of conduit and uses three gates. A stilling basin is provided to dissipate energy of discharge from outlet conduit. Spillway is in the west bluff, weir 430 feet long. Water flows over the spillway which discharges into a paved chute and thence into an excavated earth channel to the Des Moines River. Top of spillway is about 31 feet below top of earth embankment section, and flow over weir is uncontrolled when water in reservoir reaches its crest. Watershed area above dam site is 5,823 square miles. With pool at spillway crest elevation, lake area is 16,700 acres and contains about 676,000 acre-feet of water at that height (602,000 for flood control and 74,000 for a conservation pool to maintain minimum flows at downstream points). Lake supplements capacity of downstream Lake Red Rock at river mile 142.9. The two lakes provide a high degree of flood protection to the lower Des Moines River Valley. Reach along the Mississippi River downstream from the mouth of the Des Moines River are also benefited.

A project modification plan to minimize the adverse environmental effects at Ledges State Park, located upstream from the dam, was authorized in 1976. The project modification included relocation of affected park facilities, acquisition of additional park land, and the development of a floodway corridor, with recreational facilities, from the dam downstream to Sixth Avenue in Des Moines. Improvements to Highway 415, the main access road to existing facilities on the east side of the reservoir, were added to the project by Congress in 1984. Segments A and B of Highway 415 have been completed. Segment C of Highway 415 was completed in 1994.

Construction began in June 1965, and the dam was placed in operation for the storage of flood water in April 1977. Remedial work in Big Creek Valley, consisting of diversion dam and channel and a barrier dam, for the protection of the town of Polk City was completed in December 1974. The land acquisition program involved 25,529.397 acres in fee and 1,498.444 acres in flowage easements. The estimated project cost is \$116,470,000 including \$2,820,000 in non-Federal costs from the State of Iowa and the City of Des Moines, for recreational development. See Table 15-B for authorizing legislation.

Local cooperation. Fully complied with.

Operations during fiscal year. Maintenance repairs to the Big Creek pumps were initiated and cost \$184,478. Routine operations and maintenance

activities continued at a cost of \$4,117,782. Total operations and maintenance costs were \$4,302,260.

13. MUSCATINE ISLAND, IA

Location. Muscatine Island lies on the west bank of the Mississippi River in Muscatine and Louisa Counties, Iowa, adjacent to and in the city of Muscatine, IA. The flood protection area of 30,800 acres is protected by 15.6 miles of existing sand and clay levees. The protected area consists of residential, commercial, industrial and agricultural areas and also includes U.S. Highway 61 and the Muscatine Municipal Airport.

Existing Project. The existing levee has been raised to provide protection from 200-year floods. This protection level is achieved by improving and raising approximately 6.6 miles of the existing levee system. Also included in the project is construction of an upstream railroad closure structure, improving drainage facilities, concrete I-wall sections and relocating existing utilities. See Table 15-B for authorizing legislation.

Local Cooperation. The city of Muscatine and Muscatine Island Levee District are co-sponsors for the project. The Project Cooperation Agreement (PCA) was executed on 21 September 1995.

Operations during fiscal year. The project was completed in June 2000 and was closed in 2003. Total costs incurred during FY 04 were \$158.00.

14. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Federal flood control regulations (part 208 of title 33, Code of Federal Regulations) provide that the structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits. Costs during the period for inspections of projects turned over to local interests to ascertain compliance with Federal requirements were \$236,894. (See Table 15-H for list of completed flood control projects inspected.)

15. OTHER AUTHORIZED FLOOD CONTROL PROJECTS

See Table 15-E.

**16. FLOOD CONTROL WORK UNDER
SPECIAL AUTHORIZATION – Continuing
Authorities Program**

Navigation (Section 107) 1960 Act & Mods.) See Table 15-I.

Emergency Bank Protection (Section 14 of the 1946 Flood Control Act, Public Law 526.) See Table 15-I.

Flood Control Activities (Section 205, Public Law 84-685.) See Table 15-I.

Snagging and Clearing of Navigable Streams and Tributaries in Interest of Flood Control (Section 208, Public Law 83-780.) See Table 15-I.

Miscellaneous

**17. ECOSYSTEM RESTORATION WORK
UNDER SPECIAL AUTHORIZATION**

Project Modifications for Improvement of Environment Pursuant to Sec. 1135, Public Law 99-662, as amended (preauthorization). See Table 15-I.

Aquatic Ecosystem Restoration Pursuant to Sec. 206, P.L. 104-303. See Table 15-I.

Wetland/Other Aquatic Habitat Section 204, P.L. 102-560. See Table 15-I.

18. GENERAL REGULATORY FUNCTIONS

Enforcement	\$ 152,538
Permit Evaluations	1,831,813
Administrative Appeals	6,239
Compliance	237,186
Total	\$2,227,776

**19. OPERATIONS AND MAINTENANCE
CATASTROPHIC DISASTER
PREPAREDNESS PROGRAM**

Local Preparedness	\$ 13,403
National Preparedness	18,598
Total	\$32,001

20. OTHER PROGRAMS AND ACTIVITIES

Anti-Terrorism/Force Protection	\$ 437,224
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**21. FLOOD CONTROL AND COASTAL
EMERGENCY (FC&CE)**

Disaster Preparedness Program	\$357,545
Emergency Operations	152,621
Rehabilitation/Inspection	96,646
Total	\$606,812

22. ACTIVE GENERAL INVESTIGATIONS

See Table 15-O.

**23. COLLECTION AND STUDY OF BASIC
DATA**

See Table 15-O.

**24. PRECONSTRUCTION ENGINEERING AND
DESIGN**

There were two PED projects in progress during FY 04 at a cost of \$137,223 for Davenport Flood Control project and \$189,396 for Peoria Riverfront Development. Non-Federal cost to Davenport Flood Control \$32,667 and \$36,470 to Peoria Riverfront Development.

TABLE 15-A COST AND FINANCIAL STATEMENT

Project	Funding	FY 01	FY 02	FY 03	FY 04	Total Cost to Sep. 04
Illinois and Mississippi Canal, IL	New Work:					
	Approp.	0	0	0	0	7,605,143
	Cost	0	0	0	0	7,605,143
	Maint:					
	Approp.	120,791	0	(872)	0	24,154,167
Illinois Waterway IL and IN	Cost	118,627	3,055	0	0	24,154,257
	New Work:					
	Approp.	0	0	0	0	126,707,751
	Cost	0	0	0	0	126,706,419
	Maint:					
	Approp.	23,645,804	23,396,872	23,437,516	22,527,551	561,582,826
	Cost	23,676,798	22,691,002	24,411,285	21,788,176	535,400,164
	Rehab:					
	Approp.	(156,000)	0	0	(58,570)	162,414,869
	Cost	(102,127)	0	(75,140)	16,570	162,142,135
Illinois River Basin Restoration	Inland Water Trust Fund:					
	Approp.	(157,000)	0	0	(58,570)	15,160,249
	Cost	(104,453)	0	(42,000)	(16,570)	14,291,599
	New Work:					
	Approp.	0	0	199,000	229,000	428,000
Upper Mississippi – Illinois Navigation Study	Cost	0	0	23,161	370,094	393,255
	Contributed Funds					
	Approp.	0	0	3,000,000	0	3,000,000
	Cost	0	0	332,555	86,754	419,309
	New Work:					
Upper Mississippi River System Environmental Management Program, IL, IA, MN, MO, WI	Approp.	1,436,579	4,790,000	5,809,847	4,200,974	73,538,000
	Cost	2,049,429	5,388,662	6,152,177	4,121,857	48,259,634
	New Work:					
	Approp.	21,207	8,814,635	10,266,000	14,782,000	90,832,357
	Cost	20,998	8,875,010	10,403,000	14,709,000	91,046,659
Coralville Lake, IA	Contributed Funds:					
	Approp.	(3,584)	0	221,797	0	2,196,200
	Cost	8,921	16,530,697	300,332	10,000	1,969,500
	New Work:					
	Approp.	0	0	0	0	30,179,488
Des Moines Recreational River and Greenbelt, IA	Cost	0	0	0	0	30,173,702
	Maint:					
	Approp.	2,849,652	2,756,527	2,836,570	3,022,309	73,414,132
	Cost	2,879,118	2,752,463	2,865,734	3,010,359	71,386,546
	New Work:					
Loves Park, IL	Approp.	(100,000)	0	415,000	390,000	14,476,000
	Cost	23,534	(6,592)	414,856	390,320	14,166,731
	Contributed Funds:					
	Approp.	0	0	0	204,890	1,662,739
	Cost	0	0	0	313,887	1,758,442
	New Work:					
	Approp.	508,800	1,329,000	6,796,794	1,329,160	21,680,930
	Cost	555,843	1,327,628	6,801,888	1,329,252	21,670,357
	Contributed Funds:					
	Approp.	0	200,000	326,000	0	2,885,000
	Cost	5,619	5,555	480,987	7,800,000	10,638,037

TABLE 15-A COST AND FINANCIAL STATEMENT
(Continued)

Project	Funding	FY 01	FY 02	FY 03	FY 04	Total Cost to Sep. 04
Red Rock Dam and Lake Red Rock, IA	New Work:					
	Approp.	(3,500)	0	0	0	13,712,500
	Cost	194	0	2,376	0	11,098,746
	Maint:					
	Approp.	4,412,095	5,291,135	3,963,263	4,013,253	92,465,092
	Cost	4,258,772	5,156,220	3,889,592	4,343,133	90,122,947
	Contributed Funds:					
	Approp.	9,591	7,120	0	0	36,561
	Cost	0	14,591	2,120	0	35,133
Saylorville Lake, IA	New Work:					
	Approp.	0	0	0	0	128,067,887
	Cost	0	0	0	0	127,872,466
	Maint:					
	Approp.	3,812,239	3,787,893	3,968,122	4,300,784	90,112,788
	Cost	3,782,781	3,758,959	4,002,555	4,302,260	87,527,584
	Contributed Funds:					
	Approp.	0	29,787	29,786	9,445	3,633,446
	Cost	0	90,866	5,614	45,666	3,389,981
Muscatine Island, IA	New Work:					
	Approp.	(31,700)	15,000	3,000	(160)	5,199,140
	Cost	(4,044)	25,018	5,311	(158)	5,199,140
	Contributed Funds:					
	Approp.	0	0	0	93	748,255
	Cost	0	0	0	157	748,255

TABLE 15-B AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
2.	January 21, 1927	ILLINOIS WATERWAY, IL AND IN Channel 9 feet deep and 200 feet wide from mouth of Illinois River to Utica, 231 miles, modification of 2 U.S. locks and dams, removal of 2 State dams. (Act authorized appropriation of not to exceed \$3,500,000 for carrying on work.)	Rivers and Harbors Committee Doc. 69th Cong., 1st sess., and S. Doc. 130, 69th Cong., 1st sess.
	July 3, 1930	Channel 9 feet deep from Utica, IL, to heads of present Federal projects on Chicago and Calumet Rivers 94.6 miles to Lake Street, and 96.3 miles to turning basin 5, respectively, to be secured by means of completed dams, locks, lateral canals, and dredging begun by State of Illinois in general accordance with present plans of State for that work. Act adopting project authorized appropriation of not to exceed \$7,500,000 for carrying on work.	S. Doc. 126, 71st Cong., 2nd sess.
	June 26, 1934 ¹	Operation and care of locks and dams provided for with funds from War Department appropriation for rivers and harbors.	
	August 30, 1935	Construct modern locks and dams at LaGrange and Peoria and a channel 9 feet deep and 300 feet wide below Lockport, exact location and details of design of all structures to be left to discretion of Chief of Engineers, and for time being, that no change be made in water authorized for navigation of Illinois River by act of July 3, 1930.	H. Doc. 184, 73rd Cong., 2nd sess. ²
	August 30, 1935 ³	Also provides for 3 passing places along Sag Channel and authorized channel in Calumet-Sag route to turning basin 5, and dredging at entrance of Lake Calumet.	H. Doc. 180, 73rd Cong., 2nd sess.
	June 14, 1937	Realign portion of Calumet River and abandonment of bypassed section of Calumet River.	Rivers and Harbors Committee Doc. 19, 75th Cong., 1st sess.
	June 20, 1938	Modifies local cooperation requirements in 1935 act.	
	October 23, 1943	Pay damages to levee and drainage districts due to seepage and other factors, not to exceed \$503,500.	H. Doc. 711, 77th Cong., 2nd sess.
	March 2, 1945	Enlarge Calumet-Sag Channel to 160 feet wide and a usable depth of 9 feet. Dredge a barge channel 160 feet wide with a usable depth of 9 feet in Grand Calumet and Little Calumet River Branch of Indiana Harbor Canal to deep (lake) draft through 141st St., East Chicago, IN. Construct in Little Calumet River a lock of suitable dimensions for large navigation. Rebuild or otherwise alter at Federal expense all obstructive railroad bridges across Calumet-Sag Channel, Little Calumet River, Calumet River, Grand Calumet River, and Indiana Harbor Canal, so as to provide suitable clearance, except that no Federal funds shall be expended for removal or alteration of Illinois Central RR bridge at mile 11.20 of Little Calumet River.	H. Doc. 145, 76th Cong., 1st sess.

TABLE 15-B
(Continued)
AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
	July 24, 1946	Substitute following work for that authorized by act of March 2, 1945; replace emergency dam in Chicago Sanitary and Ship Canal; enlargement of that canal thence to Sag Junction and of Calumet-Sag Channel to afford channels 225 feet wide and usable depth of 9 feet; construct along general route depth of 9 feet to 225 feet wide between Little Calumet River and junction with Indiana Harbor Canal and 160 feet wide thence to Clark St., Gary, IN, with a turning basin at Clark St., enlarge Indiana Harbor Canal to 225 feet wide and usable depth of 9 feet between Grand Calumet River and vicinity of 141st St., inclusive; remove Blue Island lock and construct a lock and control works in Calumet River near its head, and similar structures in proposed Grand Calumet Channel west of Indiana Harbor Canal; alter or eliminate railroad bridges across three channels lakeward of Chicago Sanitary and Ship Canal, or construct new railroad bridges to provide suitable clearance.	H. Doc. 677, 79th Cong., 2nd sess.
	July 24, 1946	A small-boat harbor in vicinity of Peoria, IL, by construction of a basin 510 by 250 feet, dredged to 7 feet deep.	H. Doc. 698, 79th Cong., 2nd sess.
	July 17, 1953	\$48,933 to reimburse Nutwood Drainage and Levee District for additional pumping operation; supplementing \$58,750 authorized in October 1943 act.	H. Doc. 144, 81st Cong., 1st sess.
	July 3, 1958	Federal participation in alteration of highway bridges, Calumet-Sag Modification, Part I, which constitute unreasonable obstructions to navigation, in accordance with Public Law 647, 76th Cong., as amended.	H. Doc. 45, 85th Cong., 1st sess. ⁴
	August 18, 1968	Federal participation in alteration of highway bridges, Calumet-Sag Modification, Part II, which constitute unreasonable obstructions to navigation, in accordance with the Public Law 647, 76th Cong., as amended.	Specified in Act. Also H. Doc. 45, 85th Cong., 1st sess.
	November 17, 1986	Illinois River at Peoria, IL modification of navigation project to include an adjacent downstream water area.	Sec. 857, H.R.6, Water Resources Development Act of 1986.
	October 5, 1992	The project for inland navigation, Illinois River, Illinois, authorized by the Rivers and Harbors Act of 1935 (49 Stat. 1035), is modified to direct the Secretary to acquire dredge material disposal areas for such project, at a total Federal cost of not to exceed \$70,000,000.	Sec. 102, Water Resources Development Act of 1992.

TABLE 15-B
(Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
3.	October 2000 (P.L. 106-541)	IL RIVER BASIN RESTORATION (519) Provide for a 4-year, \$100 million dollar IL River Basin Restoration Program to include habitat rehabilitation and enhancement; development of long-term resource monitoring with computerized inventory and analysis; to complete a comprehensive plan, evaluate new technologies and innovative approaches, and to evaluate and complete critical restoration projects.	Sec. 519, Water Resources Development Act of 2000.
6.	August 15, 1985 (P.L. 99-88)	UPPER MISSISSIPPI RIVER SYSTEM ENVIRONMENTAL MANAGEMENT PROGRAM, IL, IA, MN, MO, WI Provide for a 10-year environmental program to include habitat rehabilitation and enhancement; long-term resource monitoring with computerized inventory and analysis; recreational development; assessment of economic benefits from recreational activities; and navigation system traffic monitoring.	H. Doc. 2577, 99 th Cong., 1 st sess.
	November 17, 1986	Approves 1982 Upper Mississippi River Master Plan, authorizes interstate agreements between Upper Mississippi River states, directs Secretary to implement GREAT II recommendations for disposal of dredged material and facilitate the productive use of dredge material, directs an interagency agreement with the Department of Interior for its participation in the plan, authorizes second lock at Lock and Dam No. 6.	Sec. 1103, H.R. 6, Water Resources Development Act of 1986.
	November 28, 1990 (P.L. 101-640)	Extending authorization for EMP program an additional 5 years.	Sec. 405, Water Resources Development Act of 1990.
	October 31, 1992 (P.L. 102-580)	Increase the HREP appropriation authority to a total of \$189,600,000. Sets limits on amounts which could be transferred between authorities. Operations and Maintenance costs were specified to be the responsibility of the State/Federal/ or local agency responsible for fish and wildlife management.	Sec. 102, Water Resources Development Act of 1992.
	August 17, 1999 (P.L. 106-53)	Extended the program until perpetuity. Increase authorization limits and established a 20% transfer limit. Established an Advisory Committee for independent technical review that requires a Report to Congress NLT 31 Dec 04, and every subsequent 6 years.	Sec. 509, Water Resources Development Act of 1999.
8.	June 28, 1938	CORALVILLE LAKE, IA Reservoir for flood control and recreation.	Flood Control Committee Doc. 1, 75 th Cong., 1 st sess.
	July 14, 1960	Highway bridge across Coralville Lake at or near the Mehaffey site.	None
9.	August 15, 1985 (P.L. 99-88)	DES MOINES RECREATIONAL RIVER AND GREENBELT, IA Recreational development; environmental enhancement; and related streambank stabilization.	H. Doc. 2577, 99 th Cong., 1 st sess.
	November 17, 1986	Defines area of work.	Sec. 604, H.R. 6, Water Resources Development Act of 1986.
	February 13, 2003	The non-Federal sponsor shall receive credit in an amount not to exceed \$10,000,000 toward their share of the cost of Des Moines Recreational River and Greenbelt, Iowa, projects for work performed by the sponsor, or others on behalf of the sponsor, including planning, design, and construction performed after October 1, 2002, provided the Secretary of the Army, acting through the Chief of Engineers, determines that such work is completed in accordance with U.S. Army Corps of Engineers standards and procedures and is integral to the Des Moines Recreational River and Greenbelt project.	108 th Congress, H.R. 108-10, Sec. 122

TABLE 15-B
(Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
10	November 17, 1986	LOVES PARK, IL Improved channel, diversion structures, pipes, and pond storage.	108 th Congress, H.R. 108-10, Sec. 122
11.	June 28, 1938	RED ROCK DAM AND LAKE RED ROCK, IA Reservoir for flood control and recreation.	Flood Control Committee Doc. 1, 75 th Cong., 1 st sess. PL 99-190
12.	December 19, 1985	Land Acquisition	
	July 3, 1958	SAYLORVILLE LAKE, IA Reservoir for flood control and recreation.	S. Doc. 9, 85 th Cong., 1 st sess.
	October 22, 1976	Modification to minimize adverse project impact on Ledges State Park.	H. Doc. 487, 94 th Cong., 2 nd sess.
13.	November 17, 1986	MUSCATINE ISLAND LEVEE DISTRICT AND MUSCATINE- LOUISA COUNTY DRAINAGE DISTRICT, NO. 13, IA Raise existing levees.	Sec. 401, H.R. 6, Water Resources Development Act of 1986.

1. Permanent Appropriations Repeal Act.
2. Contains latest published map of Illinois and Des Plaines Rivers.
3. Included, in part, in Public Works Administrative Program October 31, 1934, and February 28, 1935.
4. Contains latest published maps of Calumet – Sny portion.

TABLE 15-C OTHER AUTHORIZED NAVIGATION PROJECTS
(See Section 6 of Text)

Project	Status	For Last Full Report See Annual Report For	Cost To September 30, 2004	
			Construction	Operation and Maintenance
Hannibal SBH, MO	Completed	1958	\$ 108,700	\$201,685
Fort Madison, IA SBH	Active	2004		46,970
Squaw Chute at Quincy, IL	Completed	1967	70,979 ¹	9,345
Muscooten Bay, Illinois River, IL	Completed	1985	265,499	171,000
Quincy, IL, Harbor Acces Channel	Completed	1970	35,477 ²	37,700
Muscatine Harbor, IA	Completed	1964	\$353,000	\$356,061

1. Excludes \$25,851 contributed funds.

2. Excludes \$35,350 contributed funds.

TABLE 15-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS
(See Section 15 of Text)

Project	For Last Full Report See Annual Report For	Construction	Cost To September 30, 2004	
			Operation and Maintenance	Contributed Funds Expended
Completed Projects				
Banner Special Drainage and Levee Districts, IL	1943	\$ 247,822	--	--
Bear Creek Dam (City of Hannibal, MO)	1962	1,679,056	--	--
Bettendorf, IA	1987	14,930,085	--	\$ 228,073
Big Lake Drainage and Levee District, IL	1943	144,910	--	--
Canton, MO ¹	1964	1,496,555	--	--
Clinton, IA	1991	26,237,690	--	839,615
Coal Creek Drainage and Levee District, IL	1954	1,923,145	--	--
Crane Creek Drainage and Levee District, IL	1941	68,898	--	--
Des Moines and Mississippi Levee District No. 1, MO	1969	1,492,016	--	--
Des Moines, IA	1972	4,993,224	--	23,323
Drury Drainage District, IL	1964	1,144,875	--	--
Dubuque, IA	1974	10,861,170	--	145,415
East Liverpool Drainage and Levee District, IL	1941	207,826	--	--
East Moline, IL	1984	9,692,097	--	--
East Peoria Drainage and Levee District, IL	1946	279,963	--	--
Elkport, IA	1951	34,200	--	--
Evansdale, IA	1983	4,409,088	--	--
Fabius River Drainage District, MO	1941	60,500	--	--
Fabius River Drainage District, MO	1963	1,621,841	--	--
Farm Creek, IL	1997	9,859,020	154,472	--
Farmers Levee and Drainage District, IL	1942	155,562	--	--
Fulton, IL	1984	18,017,200	--	--
Galena, IL	1952	844,100	--	118,000
Green Bay Levee and Drainage District No. 2, IA	1949	299,000	--	--
Green Bay Levee and Drainage District No. 2, IA	1967	1,727,711	--	--
Gregory Drainage District, MO	1940	77,100	--	--
Gregory Drainage District, MO	1972	1,538,963	--	20,626
Hannibal, MO	1993	6,082,733	--	600,000
Henderson County Drainage District No. 1, IL	1968	1,453,217	--	--
Henderson County Drainage District No. 2, IL	1968	1,043,902	--	--
Henderson County Drainage District No. 3, IL	1949	42,700	--	--
Hennepin Drainage and Levee District, IL	1940	109,593	--	--
Hunt Drainage District and Lima Lake Drainage District, IL	1972	4,772,498	--	--
Indian Grave Drainage District, IL	1972	3,551,961	--	--
Iowa River-Flint Creek Levee District No. 16, IA	1972	6,044,693	--	--
Kishwaukee River at DeKalb, IL ¹	1957	123,300	--	--
Lacey Langellier, West Mantanzas and Kerton Valley Drainage and Levee District, IL	1954	1,290,000	--	--
Liverpool Drainage and Levee District, IL	1943	117,731	--	--
Lost Creek Drainage and Levee District, IL	1938	152,000	--	--
Marengo, IA ¹	1981	2,447,001	--	--
Marion County Drainage District, MO	1967	873,748	--	--
Marshalltown, IA	1978	8,437,511	--	252,136
Mason and Menard Drainage District, IL	1940	93,808	--	--
Meredosia Levee and Drainage District, IL ¹	1977	1,995,322	--	269,739
Milan, IL	1988	13,437,663	--	213,554

TABLE 15-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS
(Continued) (See Section 15 of Text)

Project	For Last Full Report See Annual Report For	Construction	Cost To September 30, 2004	
			Operation and Maintenance	Contributed Funds Expended
Muscatine, Mad Creek, IA ¹	1983	1,129,800	--	305,747
Muscatine Island Levee District and Muscatine-				
Louisa County Drainage District No. 13, IA	1970	3,293,276	--	220,000
Near Springfield on Sangamon River, IL	1941	--	--	--
Oakford Special Drainage District, IL	1940	38,417	--	--
Okabena Creek at Worthington, MN ¹	1957	72,432	--	--
Ottumwa, IA	1977	233,145	--	--
Pekin and La Marsh Drainage and Levee				
District, IL	1955	158,383	--	--
Penny Slough, Rock River, IL	1940	85,800	--	--
Rock Island, IL	1979	7,582,373	--	--
Rockford, IL	1989	10,032,496	--	514,188
Rocky Ford Drainage and Levee District, IL	1941	108,797	--	--
Sabula, IA	1958	411,915	--	--
Sangamon River (Mouth), IL	1980	1,048,990	272,848	15,122
Seahorn Drainage and Levee District, IL	1945	32,281	--	--
Sid Simpson Project, IL	1968	5,789,800	--	--
Sny Basin, IL	1972	14,003,560	--	--
Sny Island Levee Drainage District, IL	1942	61,400	--	--
Sny Island Levee Drainage District, IL	1968	4,956,749	--	--
South Beardstown and Valley Drainage and				
Levee District, IL	1942	220,729	--	--
South Beardstown Drainage and Levee District, IL	1942	171,839	--	--
South Quincy Drainage and Levee District, IL	1940	61,200	--	--
South Quincy Drainage and Levee District, IL	1968	1,231,243	--	--
South Quincy Drainage and Levee District, IL	1991	7,066,437	--	2,355,479
South River Drainage District, MO	1941	55,300	--	--
South River Drainage District, MO	1966	1,106,056	--	--
Spring Lake Drainage and Levee District, IL	1941	185,980	--	--
Subdistrict No. 1 of Drainage Union No. 1 and Bay				
Island Drainage and Levee District No. 1, IL	1967	3,306,695	--	--
Union Township Drainage District, MO	1947	116,576	--	--
Van Meter, IA ¹	1965	113,842	--	--
Waterloo, IA	1987	48,620,099	--	83,300
Waterloo Bridges, IA	1991	1,125,000	--	1,108,787
Authorized Projects Not Constructed				
Ames Dam and Reservoir, Skunk River, IA	1987	1,400,800	--	--
Davenport, IA	1987	--	--	--
Moline, IL ²	1987	--	--	--
Peoria, IL	1973	534,580	--	--

1. Authorized by Chief of Engineers (Sec. 205, 1948 Flood Control Act).

2. FY 89 funds of \$5,639 were expended to close out project.

TABLE 15-G DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report For	Date Deauthorized	Federal Funds Expended	Contributed Funds Expended
Cal.-Sag Channel, Part II Illinois Waterway, IL and IN	1986	1986	--	--
Campbells Island Mississippi River, IL	1969	1979	\$76,664	--
Carroll County Levee and Drainage District, IL	1938	1977	--	--
Central City Lake, Wapsipinicon River, IA	1970	1977	55,664	--
Farmers Drainage and Levee District (Sangamon River), IL	1942	1986	--	--
Green Island Levee and Drainage District, IA	1938	1977	--	--
Henderson River, IL	1964	1977	102,310	--
Illinois Waterway, IL and IN Duplicate Locks	1982	1981	--	--
Illinois Waterway Navigation Project (Pekin, IL)	1986	1986	--	--
Janesville and Indian Ford Dams, WI	1938	1977	--	--
Keithsburg Drainage District, IL	1938	1977	--	--
Pecatonica River at Darlington, WI	--	1977	--	--
Rochester Lake, Cedar River, IA	--	1977	--	--
Rock River Agricultural Levees, IL	1984	1999	858,000	--
South Beloit, IL	1979	1986	270,000	--
William L. Springer Lake Decatur, IL	1979	1986	--	--
Illinois Waterway, Marseilles Canal, IL	1989	1990	--	--
Peoria Levees, IL	--	1990	--	--
Savanna Small Boat Harbor	--	1999	--	--

TABLE 15-H
INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS
(See Section 14 of Text)

Project	Date Inspected
Alpine Dam and Page Park Dam, Rockford, IL	December 2002
Amana Remedial Works	November 2003
Andalusia	November 2003
Avon Lake	November 2003
Banner Special Drainage and Levee District, IL	November 2003
Bay Island Drainage and Levee District, IL	November 2003
Bettendorf, IA	November 2003
Big Lake Drainage and Levee District, IL	November 2003
Burlington, IA	December 2003
Canton, MO	November 2003
Carlisle	July 2002
Carlisle Remedial Works	November 2003
Cascade Levee	November 2003
Cedar Falls, LF PP	November 2003
Chandlerville, Village of	October 2003
City of Streator Municipal Levee	December 2002
Clear Lake D & LD	January 2003
Clinton, IA	November 2003
Coal Creek Drainage and Levee District, IL	November 2003
Crane Creek Drainage and Levee District, IL	October 2003
DeKalb, IL	November 2003
Des Moines, IA	October 2003
Des Moines and Mississippi Levee District No. 1, MO	November 2003
Des Moines County DD7, IA	December 2003
Des Moines County DD8, IA	December 2003
Drury Drainage District, IL	November 2003
Dubuque, IA	November 2003
East Dubuque	November 2003
East Liverpool Drainage and Levee District, IL	December 2004
East Moline, IL	November 2003
East Peoria Drainage and Levee District, IL	December 2003
East Peoria Sanitary District, IL	December 2003
Elkader	April 2003
Elkport, IA	November 2003
Evansdale, IA	November 2003
Fabius River Drainage District, MO	November 2003
Farmers Drainage and Levee District, IL	December 2003
Fulton, IL	November 2003
Galena, IL	November 2003
Greater Peoria Sanitary District	October 2003
Green Bay Levee and Drainage District No. 2, IA	December 2002
Green Island LD Roger Tarr	November 2003
Gregory Drainage District, MO	November 2002
Hager Slough Special DD	November 2003
Hannibal, MO	November 2003
Henderson County Drainage District No. 1, IL	December 2003
Henderson County Drainage District No. 2, IL	December 2003
Herget Drainage and Levee District, IL	December 2003
Iowa River-Flint Creek Levee District No. 16, IA	December 2003
Jackson, MN West Fork DM River	April 2004

TABLE 15-H (Continued)
INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS
(See Section 14 of Text)

Project	Date Inspected
Kent Creek LFP	November 2003
Keokuk Levee	November 2003
Kerton Valley Drainage and Levee District, IL	November 2003
Lacey Drainage and Levee District, IL	November 2003
Langellier Drainage and Levee District, IL	November 2003
Levings Lake Dam, IL	November 2003
Lima DD, IL	November 2003
Liverpool Drainage and Levee District, IL	October 2003
Lost Creek Drainage and Levee District, IL	November 2003
Louisa County LD No. 11	November 2003
Lower Pleasant Valley D & LD	January 2003
Mackinaw River & DD No. 1	December 2002
Mad Creek, Muscatine, IA	February 2003
Marengo, IA	November 2003
Marion County Drainage District, MO	December 2003
Marshalltown, IA	December 2003
Mason and Manard D & LD	November 2003
Meredosia Levee and Drainage District, IL	November 2003
Milan, IL	November 2003
Mississippi – Fox DD	November 2003
Morrissey Levee	October 2003
Muscatine Island LD & D	February 2003
North Sangamon Lattimore Creek	October 2003
Okabena Creek Worthington	April 2004
Oakford Special Drainage and Levee District, IL	November 2003
Oelwein	November 2003
Old River D & LD	November 2003
Ottawa Township H.S. Levee	November 2003
Ottumwa/Des Moines River	October 2003
Page Park Dam, IL	November 2003
Pekin-LaMarsh Drainage and Levee District, IL	December 2003
Penny Slough Drainage and Levee District, IL	November 2003
Rock Island Arsenal	November 2003
Rock Island, IL	November 2003
Sabula, IA	November 2003
Sanitary District of Beardstown, IL	November 2003
Seahorn Drainage and Levee District, IL	December 2003
SE Des Moines/SE Pleasant Hill	November 2003
Sny Island Levee Drainage District, IL	November 2003
South Beardstown Drainage and Levee District, IL	November 2003
South Branch Diversion Channel	November 2003
South Quincy Drainage and Levee District, IL	November 2003
South River Drainage District, MO	November 2003
South Sangamon D & LD West	October 2003
South Sangamon D & LD East	October 2003
Spoon River No. 1	January 2003
Spoon River Ranch & Roddis	December 2002
Spring Lake Drainage and Levee District, IL	December 2003
Subdistrict No. 1 of Drainage District Union No. 1 and Bay Island Levee and Drainage District No. 1, IL	December 2003

TABLE 15-H (Continued)
INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS
(See Section 14 of Text)

Project	Date Inspected
Tama, IA	December 2003
Thompson D & LD	December 2002
Union Township D & LD	November 2003
Union TWP (Skunk)	December 2003
Valley Drainage and Levee District, IL	November 2003
Van Meter, IA	October 2003
Volga, IA	November 2003
Village of Liverpool Levee	December 2003
Waterloo, IA	November 2003
West Des Moines RR/WC	October 2003
West Matanzas Drainage and Levee District, IL	November 2003
Zempel Mutual DD	December 2002
Zuma-Canoe Special	November 2003

TABLE 15-I
FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Project	Fiscal Year Costs		Total
	Federal Cost	Non-Federal	
Navigation (Section 107, 1960 Act & Mods) (216)			
Coordination Account Section 107 - 062216	\$ 2,018		\$ 2,018
Total	\$2,018		\$2,018
Flood Control (Section 205, 1948 Flood Control Act, P. L. 858) (516)			
Cascade, IA – 179047	\$6,111		\$6,111
Cedar river, Cedar Falls, IA – 091526	437	(437)	0
Coordination Account Section 205 – 062516	19,707		19,707
Dwight, IL - 181733	16,235		16,235
Dyersville, IA – 179046	12,018		12,018
East Peoria, IL – 091606	145,053		145,053
Indian Creek, Cedar Rapids, IA – 181244	45,230		45,230
Mad Creek, Muscatine, IA – 150096	197,487	3,488	200,975
Manchester, IA – 176996	17,884		17,884
Maquoketa, IA - 181230	26,567		26,567
Monticello, IA – 180456	21,872		21,872
Waverly, IA – 176863	67		67
Wolf Creek, La Porte City, IA - 180457	22,000		22,000
Total	\$530,668	\$3,051	\$533,719
Emergency Bank Protection (Section 14 of 1946 Flood Control Act, P.L. 526) (517)			
Beaver Creek, Acklye Cemetary – 178114	\$28,200	\$3,647	\$31,847
City of Panora, Raccoon River , IA – 182500	32,466		32,466
Coats Sewage Lagoon, Des Moines, IA – 160224	1,960		1,960
Coordination Account Section 14 – 062517	19,823		19,823
Highway 61, Fox River, MO – 182501	44,738		44,738
Kiser Creek, New Canton, IL – 178113	41,639		41,639
Rock River Highway 64, IL – 167360	74,040	44,471	118,511
Sac & Fox Settlement, Tama, IA – 167361	12,439		12,439
State Route A, Scotland Co, MO - 163318	(\$3,978)	5,122	1,144
Total	\$251,327	\$53,240	\$304,567
Snagging and Clearing (Section 208, 1954 Flood Control Act, P.L. 780) (518)			
Coordination Account Section 208 – 163815	\$2,570		\$2,570
Little Maquoketa River, Dubuque County – 181966	37,856		37,856
Total	\$40,426		\$40,426

TABLE 15-I
(Continued)

FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Project	Fiscal Year Costs		Total
	Federal Cost	Non-Federal	
Project Modification to Improve Environment (Section 1135 P.L. 99-662) (722)			
Big Creek Lake Spillway Mod – 175183	\$17,370		\$17,370
Coordination Account Section 1135 – 062092	1,834		1,834
Mill Creek/Milan Bottoms Habitat – 162936	(6,658)	8,763	2,105
Total	\$12,546	\$8,763	\$21,309
Aquatic Ecosystem Restoration (Section 206, P.L. 104-303) (732)			
Clear Lake, IA – 180778	\$11,717		\$11,717
Coordination Account Section 206 – 062091	5,630		5,630
Duck Creek/Fairmount Pk Wetland Rest – 167364	48,464		48,464
Freeborn County Ecosystem Restoration – 173832	936		936
Iowa River and Clear Creek, IA – 167430	48,242		48,242
Jackson Fish Passage – 170150	36,672		36,672
Kankakee River, IL – 167429	99,157		99,157
Kettle Moraine Wet Prairie Restoration – 179358	724		724
Koshkonong Creek, WI – 164649	1,006		1,006
Lake Belle View – 164774	31,118		31,118
Lake Koshkonong – 167368	51,935		51,935
Preliminary Restoration Section 206 – 062732	26		26
Token Creek Habitat, WI – 164249	58,107		58,107
Whitebreast Watershed – 162937	17,259		17,259
Windom Fish Passage, MN – 179052	3,050		3,050
Total	\$414,041		\$414,041
Wetland/Other Aquatic Habitat (Section 204, 1992 Flood Control Act, P.L. 102-560) (792)			
Blackhawk Bottoms Mississippi River – 169021	\$ 14,295		\$ 14,295
Coordination Account Section 204 – 163816	7,402		7,402
Total	\$21,697		\$21,697
TOTAL	\$1,272,723	\$65,054	\$1,337,777

TABLE 15-J

**ILLINOIS WATERWAY:
EXISTING LOCKS AND DAMS
(See Section 2 of Text)**

Lock	Miles Above Mouth	Miles to Nearest Town	<u>Dimensions</u>		Miter Sills Lift at Low Water ¹ (feet)	<u>Depth on at Low Water</u>	
			Width of Chamber (feet)	Available Length for Full Width (feet)		Lower (feet)	Upper (feet)
LaGrange Lock	80.2	7.8 below Beardstown, IL	110	600	10.0	13.0	15.5
Peoria Lock	157.7	4.1 below Peoria, IL	110	600	11.0	12.0	15.5
Starved Rock Lock	231.0	Utica, IL	110	600	18.5	14.0	16.8
Marseilles Lock	244.6	Marseilles, IL	110	600	24.45	14.0	18.6
Dresden Island Lock	271.5	8 above Morris, IL	110	600	21.75	12.25	16.85
Brandon Road Lock	286.0	Joliet, IL	110	600	34.0	13.8	17.85
Lockport Lock	291.1	Lockport, IL	110	600	30.5-39.5 ²	15.0	11.0-20.2 ²
T.J. O'Brien Lock	326.5	Chicago, IL	110	1,000	--	14.0	14.0

1. Lifts and depth on miter sills are those obtained with flat pools.

2. Variation in lift and depth on upper miter sill at Lockport is due to fluctuation of water surface in the sanitary district canal.

**TABLE 15-K ILLINOIS WATERWAY, IL AND IN
LOCK AND DAM CONSTRUCTION, FOUNDATIONS, COST
(See Section 2 of Text)**

Name	Lock		Dam			Year Complete	Estimated Federal Cost Under Existing Project
	Type of Construction	Character of Foundation	Kind	Type of Construction	Character of Foundation		
Illinois River, mouth to Utica; channel improvement by dredging in Illinois River below Starved Rock modification of two U.S. locks and dams, and removal of two State dams.	--	--	--	--	--	--	\$2,733,499 ¹
LaGrange	Concrete	Piles in sand	Movable (wicket with A-frame-crest)	Concrete and timber	Piles in sand	1939	\$ 2,744,592 ¹
Peoria	Concrete	Piles in sand	Movable (wicket type)	Concrete and timber	Piles in sand	1939	3,381,030 ¹
Starved Rock	Concrete	Rock	Movable (tainter gates)	Concrete and structural steel	Rock	1933	885,315 ¹
Marseilles	Concrete	Rock	Movable (tainter gates)	Concrete and structural steel	Rock	1933	1,853,725 ¹
Dresden Island	Concrete	Rock	Movable (tainter gates)	Concrete and structural steel	Rock	1933	2,503,376 ¹
Brandon Road	Concrete	Rock	Movable (tainter gates)	Concrete and structural steel	Rock	1933	2,031,683 ¹
Lockport	Concrete	Rock	Movable (Bear trap) (Bear trap)	Concrete and structural steel	Rock	1933	133,608 ¹
T.J. O'Brien	Concrete and sheet piling	Piles in clay	Fixed	Concrete and sheet piling	Piles in clay	1960	6,954,700 ¹

**TABLE 15-K ILLINOIS WATERWAY, IL AND IN
(Continued) LOCK AND DAM CONSTRUCTION, FOUNDATIONS, COST
(See Section 2 of Text)**

Name	Lock		Dam			Estimated Federal Cost	
	Type of Construction	Character of Foundation	Kind	Type of Construction	Character of Foundation	Year Complete	Under Existing Project
Lock and dam equipment	--	--	--	--	--	--	1,250,304 ¹
Total locks and dams	--	--	--	--	--	--	\$ 24,471,832

1. Actual cost.

**TABLE 15-L ILLINOIS WATERWAY, IL AND IN
ADDITIONAL FEATURES ENTERING INTO COST
(See Section 2 of Text)**

Dredging:	
Little Calumet and Calumet Rivers	\$ 2,135,358 ¹
Calumet-Sag, 3 passing places	813,318 ¹
Starved Rock to Lockport	6,007,335
Starved Rock to Grafton	2,917,607
Calumet-Sag Channel	19,238,200
Peoria small boat harbor	24,937 ¹
Protection piers at all locks	77,613 ¹
Calumet-Sag modification engineering and design	5,141,474
Calumet-Sag modification, supervision and administration	5,466,804
Rebuild highway bridges	19,327,850
Rebuild railway bridges:	
Calumet-Sag Channel	20,828,435 ¹
Little Calumet and Calumet Rivers	18,362,041 ¹
Recreation Facilities, Code 711	445,000
Removal of Blue Island lock	288,600 ¹
Grand Calumet River controlling works ²	
St. Louis District	1,081,600 ¹
Total additional features	\$100,442,142
Total existing project	\$124,913,974

1. Actual cost.

2. Placed in inactive status November 19, 1974.

TABLE 15-M EXISTING PROJECT

See Section in Text	Project	Item	Length (feet)	Width (feet)	Depth (feet)
2.	Illinois Waterway, IL and IN	Nine locks and six dams	--	--	--
		Grafton to Lockport, IL	291.1 miles	300	9
		Lockport to controlling works	2.0 miles	200-300	9
		Controlling works to junction with Calumet-Sag Channel	10.0 miles	225	9
		Calumet-Sag Channel to lock in Blue Island	16.0 miles	225	9
		Calumet and Little Calumet Channel, from Blue Island to turning basin 5	7.7 miles	300	9
		Grand Calumet River Channel from junction with Little Calumet River to and in Indiana Harbor Canal to 141st, East Chicago, IN	9.0 miles	9	--
		Also, Grand Calumet River Channel from junction of Indiana Harbor Canal and Grand Calumet River to Clark St. in Gary, IN, with a turning basin at Clark St.	4.2 miles	160	9
		A channel in Chicago Sanitary and Ship Canal and South Branch Chicago River from Sag-Junction to Lake St. in Chicago, IL	22.1 miles	175-300	9

**TABLE 15-N ILLINOIS WATERWAY, IL AND IN
TOTAL COST OF EXISTING PROJECT
TO SEPTEMBER 30, 2004
(See Section 2 of Text)**

	New Work	Maintenance	Rehabilitation	Total
Regular Funds	\$120,886,748	\$557,461,572	\$155,466,400	\$712,927,972
Public Works Funds	3,960,735	--	--	3,960,735
Emergency Relief Funds	1,858,936	--	--	1,858,936
Total	\$126,706,419	\$557,461,572	\$155,466,400	\$718,747,643

1. Includes \$1,735,890 expended between 1927 and 1936 on the operation and care of the works of improvement under the provisions of the permanent indefinite appropriation for such purposes.

**TABLE 15-O ACTIVE GENERAL INVESTIGATIONS
(96X3121)**

Item and CWIS Number	FISCAL YEAR COSTS		
	Federal Cost	Non-Federal	Total
SURVEYS (Category 100)			
<u>Flood Damage Prevention (120)</u>			
Des Moines & Racoon River, IA – 013490	\$ 390,320	\$313,887	\$704,207
Illinois River at Beardstown, IL – 014400	48,080		48,080
Keith Creek, Rockford, IL – 013840	29,646		29,646
Lower Des Moines, IA & MO – 081383	233		233
Total	\$ 468,279	\$313,887	\$782,166
<u>Special Studies (140)</u>			
Clear Lake, IA – 015151	\$ 59,640		\$ 59,640
Fort Dodge, IA – 013763	1,865		1,865
Illinois River Basin Restoration – 013818	463,378	85,754	549,133
Illinois River Ecosystem Restoration – 014293	102,237	129,381	231,618
Peoria Riverfront Development, IL – 013410	2,798	236	3,034
Rock River, IL & WI – 012949	24,934	40,486	65,420
Upper Miss. River Flow Freq Study – 013414	81,256		81,256
Total	\$736,107	\$255,858	\$991,965
<u>Watershed/Comprehensive Studies (150)</u>			
Upper Miss River Comprehensive Study – 010565	\$ 1,432,866		\$ 1,432,866
Total	\$ 1,432,866		\$ 1,432,866
<u>Review of Authorized Projects (160)</u>			
Mississippi River Navigation Study – 010315	\$4,121,858		\$4,121,858
Total	\$4,121,858		\$4,121,858
<u>Miscellaneous Activities (170)</u>			
Interagency Water Resources Dev. – 014713	\$17,065		\$17,065
N. American Waterfowl – 053904	1,698		1,698
Review of FERC Licenses – 053857	993		993
Special Investigations – 017250	20,399		20,399
Total	\$40,155		\$40,155
<u>Coordination Studies with other Agencies (180)</u>			
Cooperation w/other Water Agencies – 053907	\$19,643		\$19,643
Total	\$19,643		\$19,643
<u>Planning Assistance to States (180)</u>			
PAS Negotiation Funds – 014800	\$ 11,603		\$ 11,603
PAS-IL-Lake Sinnissippi – 017025	-65	1,632	1,568
PAS-IL-LaSalle I&M Canal – 017027	33,913	25,688	59,601
PAS-IL-Pekin, IL – 017028	9,459	9,418	18,878
PAS-IL-Sunset Marina Study – 014001	52,111	48,682	100,793
PAS-IT-SAC Fox Tribe Surveying – 072002	-3	852	849
Total	\$ 107,019	\$ 86,273	\$ 193,291
TOTAL (Category 100)	\$6,925,926	\$656,017	\$7,581,943

TABLE 15-O ACTIVE GENERAL INVESTIGATIONS
(Continued) (96X3121)

Item and CWIS Number	FISCAL YEAR COSTS		
	Federal Cost	Non-Federal	Total
COLLECTION AND STUDY OF BASIC DATA (Category 200)			
<u>Floodplain Management Services (250)</u>			
Flood Plain Mgmt Services – 082030	\$ 41,702		\$ 41,702
Technical Services – 082040	52,492		51,492
Quick Responses – 082045	12,052		12,052
SS Hannibal, MO – 083187	44,934		44,934
Total	\$ 151,181		\$ 151,181
<u>Hydrologic Studies (260)</u>			
General Hydrologic Studies – 053820	\$ 22,966		\$ 22,966
Total	\$ 22,966		\$ 22,966
TOTAL (Category 200)	\$ 174,147		\$ 174,147
GRAND TOTAL GENERAL INVESTIGATIONS	\$7,100,073	\$656,017	\$7,756,091
(NON REIMBURSABLE)			

ST. PAUL, MN, DISTRICT

District comprises western Wisconsin, major portion of Minnesota, northern and eastern North Dakota, and small portions of northeastern South Dakota and northern and northeastern Iowa embracing drainage basins of Mississippi River and tributaries from its source to mile 614 above mouth of Ohio River;

Red River of the North and tributaries; those streams north of Missouri River Basin in North Dakota; and U.S. waters of Lake of the Woods and its tributaries. That section of Mississippi River above mile 614 is included in report on Mississippi River between Missouri River and Minneapolis, Minnesota.

IMPROVEMENTS

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Navigation

1. MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS, MN

For report on this improvement see chapter on Mississippi River between Missouri River and Minneapolis, Minnesota.

2. RESERVOIRS AT HEADWATERS OF MISSISSIPPI RIVER, MN

Location. Reservoirs are on the Mississippi River and several of its tributaries in Itasca, Beltrami, Hubbard, Aitkin, Cass and Crow Wing Counties, MN. (See Table 16-H on reservoirs.)

Previous projects. For details see page 1888 of Annual Report for 1915, and page 1098 of Annual Report for 1938.

Existing project. Provides for reconstruction from timber to concrete at Winnibigoshish, Leech Lake, Pokegama, Sandy Lake and Pine River Dams, and construction of a concrete dam at Gull Lake. Pokegama was built on bedrock and the others on pile foundations. A portion of Leech Lake Dam from piers 26 to 39 was replaced with an earth fill. Constructed three dikes at Winnibigoshish, four at Pokegama, two at Sandy Lake, and 16 at Pine River. Sandy Lake Dam includes a lock 160 feet long, 30 feet wide, with a maximum lift of 9.5 feet and a depth of 2.5 feet on lower sill at low water which was converted to use as a spillway. (See Table 16-B for authorizing legislation.) The Pine River Dam main embankment consists of a timber diaphragm core and earth fill. The Pine River Dam control structure is made of reinforced concrete with a steel sheet pile cutoff and is supported on a timber substructure. Pine River Dam was modified during the period 1999-2002 to pass 70% of the Probable Maximum Flood. During this period, the 13 gate openings were enlarged and outfitted with new gates; the wing walls were modified; the existing dam and embankment was raised via addition of a parapet wall and a concrete-capped sheet pile wall, to provide 5 ft. of freeboard over the design flood; the foundation was grouted to stop seepage and fill voids; and the perimeter dikes were improved. Total Federal cost to the United States for new Dam Safety Assurance work at the Pine River Dam is \$11,058,967.

Local cooperation. Fully complied with.

Terminal facilities. None.

Operation and results during fiscal year. Reservoirs were operated as required, recreation facilities and equipment maintained, and surveys, repairs, reports and data collection cost \$4,141,417 Federal and \$85,182 non-Federal. Dam Safety: Engineering and design for dam safety modifications at Pine River Dam cost \$5,167 Federal.

Condition at end of fiscal year. Existing project was completed in 1937. Flowage rights were acquired on all lands affected by construction, maintenance, and operation of reservoirs. A total of 1,672.26 acres in fee are owned by the United States. The United States has easements, flowage rights, and other rights of use on another 296,334.44 acres. Structures are in fair condition. Recreation facilities for public use are being constructed intermittently at all reservoir areas. (See Table 16-H for capacities and costs by reservoir.) Pine River Dam has been classified as a high hazard dam under the National Dam Safety Program due to inadequate spillway capacity which could lead to dam failure during a flood event. Construction of dam safety modifications is currently underway.

3. UPPER MISSISSIPPI RIVER SYSTEM ENVIRONMENTAL MANAGEMENT PROGRAM (UMRS-EMP)

Location. The program is authorized for the commercially navigable portions of the Upper Mississippi River System. In the St. Paul District, this includes the Mississippi, Minnesota, Black, and St. Croix Rivers in the states of Minnesota, Wisconsin and Iowa.

Existing project. The purpose of the UMRS-EMP as stated in the authorizing legislation is to ensure the coordinated development and enhancement of the Upper Mississippi River System, recognizing its several purposes. It is intended to protect and/or enhance the river resources and guide future river management. The primary emphasis of the program is on habitat rehabilitation and enhancement projects. Long-term resource monitoring will provide the means for more informed management of the UMRS. Also authorized, was a study of the economic impacts of recreation (completed), navigation traffic monitoring (continuing under other authority), and recreation projects (unfunded). The program was initiated by WRDA in 1986 and the 1999 WRDA extended the EMP on a continuing basis. The execution of the program is closely coordinated with the Upper Mississippi River Basin Association, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, and the three affected states in the St. Paul District. See Rock Island District Tables 15-A and 15-B for total program costs and authorizing legislation.

In the St. Paul District, twenty-two habitat projects have been completed. These are the Guttenberg Waterfowl Ponds (IA), Island 42 (MN), Lake Onalaska (WI), Blackhawk Park (WI), Pool 8 Islands Phases I and II (WI), Indian Slough (WI), Finger Lakes (MN), Lansing Big Lake (IA), Cold Springs (WI), Pool 9 Island (WI), Spring Lake Peninsula (WI), Bussey Lake (IA), Peterson Lake (MN), Polander Lake (MN), East Channel (WI/MN), Rice Lake (MN), Small Scale Drawdown (WI), Trempealeau (WI), Bank Stabilization (IA, WI, MN), Long Lake (WI), and Ambrough Slough (WI). Most of the projects are operated and maintained by the U.S. Fish and Wildlife Service. However, projects not located on lands managed as a national wildlife refuge are maintained by the applicable state department of natural resources. Through FY 2004, funds expended by the St. Paul District have amounted to \$40,232,000 for planning, design, construction and monitoring of habitat rehabilitation and enhancement projects; \$967,000 for long term resource monitoring; \$768,000 for economic impacts of recreation study; and \$2,958,000 for program management. The annual authorized funding level for the overall program is about \$33 million.

Local cooperation. Local cooperation agreements are obtained for habitat project features not located on lands managed as a national wildlife refuge, as specified in Section 906(e) of the 1986 WRDA.

Operations and results during fiscal year. In the St. Paul District, costs during the year totaled \$2,580,476 Federal and \$10,000 non-Federal. The majority of funds were expended on the planning, design, construction and monitoring of habitat projects. Design was continued on six projects. Construction was completed on one project (Ambrough Slough) and initiated on one project (Spring Lake Islands).

4. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Sec. 107, Public Law 87-645, as amended.

In FY 04, \$10,006 was expended on Section 107 Coordination Account; \$40,272 on East Two River, Tower, MN.

Flood Control

5. BRECKENRIDGE, MN

Location. Breckenridge, Minnesota, is located in Wilkin County in western Minnesota, approximately 200 miles north and west of the Minneapolis-St. Paul

metropolitan area. The city is bounded on the west by the Red River of the North and the Bois de Sioux River. The Ottertail River flows from the east, bisecting the city. The city of Wahpeton, ND, lies across the Red River from Breckenridge.

Existing project. A feasibility study recommended implementation of a flood damage reduction project consisting of a high-flow diversion channel located to the north of the Ottertail River and entering into the Red River and two separable permanent levee reaches that would protect all of Breckenridge. The project was authorized by WRDA 2000.

Local cooperation. A Feasibility Cost Sharing Agreement was executed between the Federal Government and the city of Breckenridge on June 29, 1999. This agreement required the city to provide 50 percent of the costs of performing the feasibility study. A Project Cooperation Agreement, negotiated between the Federal Government and the city was signed on 15 August 2002.

Operations and results during fiscal year. Construction continued for the Stage 1, Diversion Channel. Total FY 04 Federal costs were \$4,795,532 and Non-Federal \$140,607.

Condition at end of fiscal year. During the first stage of construction, three highway bridges were completed along with significant completion of the diversion channel, main inlet, and a side inlet structure. The final grading, placement of topsoil, and placement of riprap will be completed in FY 05. Approximately 90% completion of construction was accomplished for Stage 1.

6. BROOKLYN CENTER SEWER LINE, MISSISSIPPI RIVER, MN

Location. Along the right bank of the Mississippi River, Hennepin County, about 5 miles north of Minneapolis, Minnesota.

Existing Project. The emergency streambank protection project on the Mississippi River involves approximately 750 feet of riverbank. The project consists of rockfill toe protection and associated earthwork to protect an 18-inch sanitary sewer line. The project was approved by the Mississippi River Division for construction on 6 March 2002, under the authority contained in Section 14 of the 1946 Flood Control Act, as amended.

Local Cooperation. See Annual Report for 2002. A Project Cooperation Agreement was executed

between the Federal Government and the City of Brooklyn Center on 28 May 2002.

Operation and results during fiscal year. New Work: The preparation plans and specifications is essentially complete. The City completed the acquisition of the lands, easements, and right-of-way in August 2003. Total FY 04 Federal Costs were \$437,320 and non-Federal, \$122,559.

Condition at the end of the fiscal year. The construction contract of the emergency streambank protection project was awarded in early FY 04. Construction was substantially complete in July 2004. The project will be closed in FY 05.

7. CHASKA, MN

Location. In Carver County in south-central Minnesota on the Minnesota River. (For general location, see Geological Survey map of Minnesota.)

Existing project. The plan of improvement consists of a levee and interior drainage works along the Minnesota River, flood diversion channels on Chaska Creek and East Creek, and appropriate floodplain regulation measures. Principal project features include: approximately 1.1 miles of upgraded levee, 1.5 miles of new levee, and one pumping station on the Minnesota River; 1.1 miles of diversion channel on Chaska Creek; and 1.0 mile of diversion channel on East Creek. Approximately 2.9 miles of paved recreation trails on top of the levee and around Courthouse Lake are also included in the proposed plan. Estimated Federal cost for new work is \$30,397,000 and \$12,558,000 is to be contributed by local interests. Project was authorized by the 1976 Water Resources Development Act. (H. Doc. 644, 94th Congress, 2d sess., contains latest published map.)

Local cooperation. See Annual Report for 1977 for requirements. A local cooperation agreement was executed on Sep. 12, 1988. The agreement included cost sharing provisions in accordance with the 1986 Water Resources Development Act.

Operations and results during fiscal year. Project financial close-out activities were conducted. Total Federal costs were \$0 and non-Federal, \$7,896.

Condition at end of fiscal year. Construction is complete. A project dedication was held on July 28, 1998.

8. CROOKSTON, MN

Location. In Polk County in northwest Minnesota, approximately 25 miles east of Grand Forks, North Dakota. It is located on the Red Lake River 52 miles upstream from its confluence with the Red River of the North at East Grand Forks.

Existing project. This flood reduction project was specially authorized by the Water Resources Development Act of 1999 and appropriations for the new start construction were provided in 2001 budget appropriations. The cost-shared feasibility report and environmental assessment that justified the Federal project was completed in 1997 and recommended a local flood protection project consisting of 2 downstream high-flow cutoff channels, and levees built to the 100-year level of protection for Thorndale, Woods and Downtown/Riverside neighborhoods. The recommended plan has a fully funded baseline cost estimate of \$9.5 million, and a benefit to cost ratio of 1.6. However, based on the plans and specifications, the costs are now projected to increase to approximately \$10.5 million. Preconstruction engineering and design efforts began in 1998 and the plans and specifications for Stage I of the project construction were completed in October 2000. Construction began on Stage I in July 2001 and was completed in September 2002. The Stage II plans and specifications were completed in August 2001. Stage II construction began in August 2002 and was completed in October 2004.

Local cooperation. Negotiation of a Project Cooperation Agreement was completed and signed on Mar. 19, 2001. The non-Federal Sponsor will comply with the local cost sharing requirements of Water Resources Development Act of 1986, as amended.

Operations and results during fiscal year. New Work: Continued construction on Stage 2 features; cutoff channel #3, Summit Ave. and Ash St. Road raises, and levee construction in the Wood's addition, Thorndale, and Elm St. FY04 Federal costs were \$1,862,806 and non-Federal costs were \$418,138.

Condition at end of fiscal year. Construction on Stage I is 100 percent complete and 100% complete on Stage II.

9. GRAFTON, PARK RIVER, ND

Location. In Walsh County in northeastern North Dakota along the Park River where State Highway 81 and the Park River intersect about 340 miles northwest of Minneapolis-St. Paul, Minnesota.

Existing project. The recommended plan will provide flood protection for the city of Grafton; it consists of a 3-mile-long bypass channel just north of Grafton. The tieback levee will direct the flood flows to the inlet of the control structure. River flows that exceed 2,000 cubic feet per second (cfs) will be diverted through the proposed bypass channel. The project is estimated to cost \$33,600,000 with an estimated Federal cost of \$25,200,000 and an estimated non-Federal cost of \$8,400,000. Grafton was authorized for construction by WRDA 1986, deauthorized in 1991, and subsequently reauthorized by Section 364 of WRDA 1999.

Local cooperation. The city of Grafton is the local sponsor. In accordance with the cost sharing concepts reflected in the Water Resources Development Act of 1986, as amended, and Section 121, Energy and Water Development Appropriations Act, 2004 (Public Law 108-137), local interests will be required to provide lands, easements, rights-of-way, and borrow and excavated or dredged material or disposal areas; modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project; pay five percent of the costs allocated to flood control; contribute an additional amount in cash as necessary to bring the non-Federal shares of costs allocated to flood control to a minimum 25 percent; and bear all costs of operation, maintenance, and replacement of the flood control facilities.

Operations and results during fiscal year. New Work: Engineering associated with pre-engineering and design was accomplished at a Federal cost of \$165,364 and non-Federal costs of \$214.

Condition at end of fiscal year. The General Reevaluation Report was approved by the ASA(CW). PCA on hold at the local sponsor's request.

10. GRAND FORKS, NORTH DAKOTA AND EAST GRAND FORKS, MINNESOTA

Location. Grand Forks, North Dakota, is located in Grand Forks County in eastern North Dakota about 70 miles south of the Canadian border. East Grand Forks, Minnesota, is located at the outlet of the Red Lake River to the Red River of the North, immediately across the river from Grand Forks. (For General Location see Geological Survey map of either North Dakota or Minnesota.)

Existing project. Project was authorized by P.L. 105-277, Omnibus Appropriation Bill FY 99. Estimated cost (2003) of the entire flood damage reduction project

is \$403,900,000, total cost to the United States is estimated at \$208,800,000 and total cost to the non-Federal sponsors (cities of Grand Forks and East Grand Forks) is estimated at \$195,100,000. The flood damage reduction project consists of a flood barrier around both communities providing protection against a flood equivalent to the peak discharge that occurred during the devastating flood of 1997 (136,900 cubic feet per second). A secondary purpose of recreation is also included in the authorized project.

Local cooperation. Project Cooperation Agreement was signed with both communities in January 2000. The non-Federal sponsors will comply with the local cost share requirements of Water Resources Development Act of 1986, as amended.

Operations and results during fiscal year. New Work: Total Federal construction costs for FY 04 were \$30,842,174 and non-Federal costs of \$6,882,487.

Condition at end of fiscal year. Construction is essentially complete on the Riverside Dam Bank Stabilization, removal of the Pedestrian Bridge, pump and generator supply contracts; Grand Forks Phase I Levees, East Grand Forks Phase I Levees, English Coulee Diversion and Pump Station, and the 55th Street Pump Station. The East Grand Forks Phase II Levees and Grand Forks Phase II Levees are nearing completion. Construction is underway on the Phase III Levees, the Heartsville Coulee Diversion, and the Pedestrian Bridges. The Phase IV Levee designs are essentially complete and ready for advertising subject to the availability of funding. The overall project is currently scheduled for completion in 2006 depending on when construction can begin in the Phase IV Levees.

11. HOMME LAKE AND DAM, ND

Location. Dam is on South Branch of Park River about 4 miles upstream from Park River, ND, and 62.1 miles above mouth of Park River. South, Middle, and North Branches, headwater streams of Park River, rise in Cavalier County in northeastern North Dakota and flow easterly to an almost common confluence near Grafton, ND, forming the main stream which flows easterly 35 miles to join Red River of the North about 35 miles south of the international boundary. (For general location, see Geological Survey map of North Dakota.)

Existing project. See Annual Report for 1962. Project was authorized as Park River Reservoir by 1944 Flood Control Act (S. Doc. 194, 78th Cong., 2d sess.), and redesignated Homme Reservoir and Dam by Public Law 435, 80th Congress, 2d session. Project restoration

of wetland habitat conditions is taking place under the authority contained in Section 1135 of the 1986 Water Resources Development Act, as amended. Latest published maps are in project document. A reconnaissance report was completed in 1994 under the Dam Safety Assurance Program. The report recommended adding a new spillway to increase the dam's discharge capacity to the Probable Maximum flood level. Estimated cost (2003) to the United States for new Dam Safety Assurance work is \$11,600,000 and \$77,000 is to be contributed by local interests.

Local cooperation. Fully complied with. Total costs for all requirements of local cooperation under terms of project authorization, including required non-Federal contributions, were \$62,800. In addition, local interests contributed \$16,220 for construction of a water supply outlet through dam and incurred other costs of \$19,600. The North Dakota Game and Fish Department has agreed to serve as the non-Federal sponsor for the environmental improvement to the project.

According to current Dam Safety cost sharing guidance, the local sponsors are required to fund 15 percent of the dam safety improvement costs in the same proportion as the original construction was cost shared. The local sponsors would therefore pay for 4.5 percent of 15 percent or 0.68 percent of the dam safety costs. The North Dakota Office of the State Engineer has supported the proposed modifications identified in the Reconnaissance Report.

Operations and results during fiscal year. Maintenance: Structure was operated, maintained, inspected and evaluations were performed at a cost of \$153,307. Dam Safety: Total Federal costs of \$516,001 and non-Federal costs of \$0.

Condition at end of fiscal year. Project completed in June 1956 except for additional recreational facilities which have been done intermittently since that time. Construction began in April 1948 and major structures were completed in May 1951. Structures are in good condition. Government has acquired 395 acres of land in fee and easements over 7.8 acres of land for project. An additional 6.3 acres of land have been donated for recreational development and 3.75 acres have been acquired due to bank erosion bordering the project. Construction of a habitat improvement project (under Section 1135 authority) was completed and the project was turned over to the local sponsor, the North Dakota Fish and Game Department. Homme Dam has been classified as a high hazard dam under the National Dam Safety Program due to inadequate spillway capacity which could lead to dam failure during a flood event. Engineering and design of dam safety modifications has

been completed and construction of a new concrete spillway was completed in October 2003.

12. MARSHALL, MN

Location. In Lyon County in southwestern Minnesota along the Redwood River about 68 miles above its confluence with the Minnesota River at the city of Marshall, Minnesota. (For general location see Geological Survey map for Minnesota.)

Existing project. See page 1059 of Annual Report for 1964 for completed channel improvement project authorized by 1960 Flood Control Act. Federal costs amounted to \$1,802,866. The existing flood control project was completed in 1963. In response to a need for additional flood control, a feasibility study was completed in 1979. The project recommended in the feasibility report was authorized by the Water Resources Development Act of 1986, Public Law 99-662, Section 401(a) and reauthorized by the Water Resources Development Act of 1988, Public Law 100-676. Improvements include 4.7 miles of additional levees, 3.8 miles of bank protection, 0.3 mile of new high-flow diversion channel, an interbasin overflow structure, modifications to the existing diversion and drop structures, and a recreation plan. The project would provide protection against a flood having an occurrence interval of about once in 115 years. Estimated Federal cost (2000) for new work is \$7,850,000 and \$2,580,000 is to be contributed by local interests.

Local cooperation. Fully complied with for completed work. Project was transferred to local interests on Dec. 23, 1963.

For new work, see Annual Report for 1985 for requirements. A local cooperation agreement was executed on Sep. 9, 1996. The agreement included cost sharing provisions in accordance with the 1986 Water Resources Development Act.

Operations and results during fiscal year. New Work: Project financial close-out analysis was essentially completed. Federal costs were \$0, non-Federal \$3,208.

Condition at end of fiscal year. Construction of completed work was initiated August 1962 and completed December 1963. Construction of improvements to that work was completed in September 2000.

13. PORTAGE, WI

Location. In Columbia County in central Wisconsin along the Wisconsin River about 35 miles north of

Madison, Wisconsin. (For general location see Geological Survey map for Wisconsin.)

Existing project. The project includes 1.2 miles of existing levee improvement; 1.6 miles of new levee; one highway and one railroad closure; cultural mitigation; and recreation features along the left bank of the Wisconsin river at Portage. The project would protect against a flood having an occurrence interval of about once in 100 years. Estimated Federal cost (2001) for new work is \$8,450,000 and \$2,950,000 is to be contributed by local interests. Project was authorized by the Water Resources Development Act of 1986 (Public Law 99-662).

Local cooperation. See Annual Report for 1989 for requirements. A Project Cooperation Agreement between the city of Portage and the Federal Government was executed in October 1996. The agreement included cost sharing provisions in accordance with the 1986 Water Resources Development Act.

Operations and results during fiscal year. New Work: A construction contract awarded in July 1997 is complete. Work awarded September 2 and completed in FY03 consisted of raising a railroad spur track and constructing a short reach levee to allow interbasin flow to Fox River, which will offset a project induced stage increase of .08 feet on the Wisconsin River. FY04 Federal costs were \$18,645, non-Federal \$20,581.

Condition at end of fiscal year. Construction of flood protection is complete.

14. SHEYENNE RIVER, ND

Location. The Sheyenne River Basin is included in 16 counties in the southeastern portion of North Dakota and drains an area of 7,140 square miles into the Red River of the North near Fargo, North Dakota. The principal area of flood damages in the basin is located at the lower end within Cass County and the city of West Fargo. (For general location, see Geological Survey map of North Dakota.)

Existing project. The project as authorized by the 1986 Water Resources Development Act consists of three major components for Federal implementation: 1) 11.9 miles of levee and a 6.7 mile flood diversion channel at West Fargo; 2) 7.5 miles of flood diversion channel from Horace to West Fargo; and 3) a five-foot raise of the Baldhill Dam flood control pool. The Water Resources Development Act of 1986 stipulated that the project shall also include a dam and reservoir of approximately 35,000 acre-feet of storage for the purpose of flood protection on the Maple River. This com-

ponent was deauthorized April 16, 2002. There are several items of local cooperation required to implement the plan, and several components identified for non-Federal implementation which would supplement the recommended plan. Estimated cost (2000) to the United States for new work is \$31,130,000 and \$12,470,000 is to be contributed by local interests.

Local cooperation. See Annual Report for 1988 for requirements. Project consists of three separable components each requiring a local cooperation agreement. The Southeast Cass Water Resource District is the local sponsor for the West Fargo Unit and the Horace to West Fargo Unit. The local cooperation agreement for the West Fargo Unit was executed on July 25, 1988 (amended on June 4, 2001), and for the Horace to West Fargo unit on Mar. 6, 1990. The Sheyenne River Joint Water Resource District is the local Sponsor for the Baldhill Pool Raise Unit. The local cooperation agreement for the Baldhill Pool Raise Unit was executed on May 31, 2000. The Maple River Reservoir Unit was deleted from the project.

Operations and results during fiscal year. New Work: Design was completed and construction was initiated and completed on the Stage 3 Wesley Acres contract. Construction for an additional pump station for the West Fargo component was completed. Total Federal costs were \$2,166,296 and non-Federal costs \$481,000.

Condition at end of fiscal year. Construction of the West Fargo Unit is essentially complete and construction of the Horace to West Fargo Unit is fully complete. Both of these units were operated during the spring and summer floods of 1993 and the spring floods in 1994, 1995, 1996, and 1997 and performed very well although some erosion damage was sustained on both projects. For the Baldhill Pool Raise Unit, contract for Stage 3, Wesley Acres Church Camp, was completed; preparation of a revised operating plan was completed; and preparation of revised flood insurance rate maps was initiated.

15. WAHPETON, ND

Location. Wahpeton, ND, is located in Richland County in eastern North Dakota, approximately 55 miles south of Fargo, ND. The Red River of the North and the Bois de Sioux River bound the city on the east. The confluence of the Ottetail River with the Red River of the North is located at Wahpeton. The city of Breckenridge, MN, lies across the Red River of the North from Wahpeton.

Existing project. A feasibility study recommended implementation of a flood reduction project that consists of a permanent levee system protecting most of the city and a flood easement to keep the breakout flood flows from being blocked in the future. The project is authorized by Section 205 of the 1948 Flood Control Act, as amended. Section 205 authorizes construction of small projects for flood control and related purposes not specifically authorized by Congress. Projects recommended for construction under Section 205 must be economically justified and limited to a Federal cost of \$7 million.

Local cooperation. See Annual Report for 2001. The Project Cooperation Agreement was executed between the Federal Government and the city of Wahpeton on June 12, 2002.

Operations and results during fiscal year. Construction is continuing. Total FY 04 Federal costs were \$2,792,448 and non-Federal \$678,242.

Condition at end of fiscal year. Construction of the flood damage reduction project at Wahpeton, North Dakota is underway.

Environmental

16. MILLE LACS REGIONAL WASTEWATER, MN

Location: Project is located in the City of Garrison and the townships of Kathio and West Mille Lacs (GKWML). Existing development along the western shoreline of Mille Lacs Lake, one of the largest and most popular trophy fishing lakes in Minnesota, consists of a mixture of residential, commercial, and Mille Lacs Band of Ojibwe housing and casino structures. Most of the structures' wastewater is treated by individual unreliable septic systems.

Existing Project: The GKWML Sanitary District and the Mille Lacs Band entered into an agreement to design, construct, and operate a regional wastewater treatment project. The Band constructed a lift station at the northern edge of its reservation boundary. The Band has also completed construction of the Regional Sewage Treatment Plant. The GKWML Sanitary District will construct a sanitary sewer line to collect and transfer wastewater within its jurisdiction to the Band's lift station for further transport to the Regional Treatment Plant. Currently, however, a concern has been raised by a MN state legislator over permitting of the Regional Treatment Plant. While the plant is complete it has not started treating wastewater due to the permit issues.

Local Cooperation: The estimated total cost of the GKWML portion of the project is \$16,500,000. Section 219 funds will be used to assist the Sanitary District in the construction of a \$3,051,000 "functional" portion of the GKWML project. Functional is defined as a portion of the Project that can be operated and maintained in advance of completion of the entire Project and can function independently and for a useful purpose, although the balance of the Project is not complete. A Section 219 Project Cooperation Agreement has been drafted and is awaiting definition of the functional project portion to be completed. Under Section 219 the PCA must be signed at USACE, and the Corps has design and construction responsibilities for the functional project portion.

Operations and results during the fiscal year. As appropriations for the Section 219 project were received after the Local Sponsor had entered into a contract with an AE firm, the Corps is coordinating with the AE to insure plans are completed for advertisement and award by the Corps. Federal costs for FY04 were \$2,760.

Condition at end of the fiscal year. Plans and specifications for the GKWML wastewater project are underway.

17. NORTHEASTERN MINNESOTA, MN

Location. Northeastern Minnesota is defined as the Counties of Aitkin, Benton, Carlton, Cass, Chisago, Cook, Crow Wing, Isanti, Itasca, Kanabec, Koochi-ching, Lake, Mille Lacs, Morrison, Pine, St. Louis, and Sherbourne, Minnesota. Areas within the 17 counties essentially comprise Minnesota Congressional District 8.

Existing project. Federal FY04 was the fourth year that funds were made available to implement the Section 569 program. Section 569 of the Water Resource Development Act of 1999 provided the Corps authority to assist Northeastern Minnesota communities with their environmental infrastructure projects. While over 30 projects had been selected between FY01 and FY03, no new projects were selected in FY04 due to limited funds. Funds available in FY04 were used to support previously approved projects.

Local cooperation. Project Cooperation Agreements for the above listed projects require the local sponsor to provide lands, easements, and rights of way, as well as the required 25 percent local Sponsor cost share funding. The program is operated on a reimbursable basis. The government and local sponsor agree on Project cost and work. The Sponsor retains a contractor

to perform the work. Upon receipt of proper invoice and Government construction inspector verification that the work was performed, the Government reimburses the Sponsor for 75 percent of the invoice billing.

Operations and results during fiscal year. Construction activities occurred on PCAs signed in previous program years. Construction inspection activities and reimbursements were made to the non-Federal project sponsors as appropriate. Federal costs for FY04 were \$1,220,880.

Condition at end of fiscal year. Construction is near completion at the cities of Orr, Bigfork, Aitkin, and Crane Lake. Design work is complete at Koochiching County.

18. NORTHERN WISCONSIN, WI

Location: Northern Wisconsin Section 154 is defined as the Counties of Douglas, Bayfield, Ashland and Iron, Wisconsin. These 4 counties are located within Wisconsin Congressional District 7.

Existing project: Federal FY04 was the second year that funds were made available to implement the Section 154 program. Section 154 of the Consolidated Appropriations Act of 2001 (P.L. 106-554) provided authorization for the Corps of Engineers to assist northern Wisconsin communities with their environmental infrastructure and water resource projects. Eleven projects were selected in FY04 for implementation including Cable (wastewater), Saxon Harbor (water resources), Butternut (wastewater and water supply), City of Superior (wastewater), City of Bayfield (wastewater), Red Cliff Tribe (water supply), Washburn (wastewater), Mellen (wastewater and water supply), and two projects in the City of Ashland (stormwater).

Local cooperation. Project Cooperation Agreements for the above listed projects require the local sponsor to provide lands, easements, and rights of way, as well as the required 25 percent local Sponsor cost share funding. The program is operated on a reimbursable basis. The government and local sponsor agree on Project cost and work. The Sponsor retains a contractor to perform the work. Upon receipt of proper invoice and Government construction inspector verification that the work was performed, the Government reimburses the Sponsor 75 percent of the invoice billing.

Operation and results during fiscal year. PCAs were signed for the communities of Glidden, Mercer, Butternut, Cable, City of Superior, and the Lake of the Falls. PCAs with the remaining local sponsors are in progress. Federal costs for FY04 were \$1,239,857.

Condition at the end of the fiscal year. Construction is nearly complete on Mercer, Butternut, Cable, Lake of the Falls, City of Superior, and Glidden.

Miscellaneous

19. LOWER ST. ANTHONY FALLS RAPIDS RESTORATION, MN

Location. The project is located on the Mississippi River, within the City of Minneapolis, Minnesota. The LSAF restoration would include development of a formal whitewater rapids channel and trail/park on the east bank of the Mississippi River, adjacent to the U.S. Army Corps of Engineers LSAF Lock and Dam.

Existing Project. The project was authorized by Sec 527 of WRDA 2000. The facility would include a recreational whitewater course for kayaking, canoeing and rafting as well as improved public access to the river and formal shore fishing opportunities. The facility would utilize the vertical drop created by the LSAF dam and include a new river channel approximately 2,000 feet long and 40 feet wide, with a vertical drop of 25 feet. The channel would flow parallel to the Mississippi River main stem in a park setting.

Local Cooperation. A design agreement was executed between the Federal Government and the State of Minnesota Department of Natural Resources (MnDNR) on 28 Feb 2002. Project is currently on hold pending MnDNR resolution of key project design issues. Upon approval of the Engineering Documentation Report and NEPA documentation, the Project Cooperation Agreement will be prepared for execution with the MnDNR.

Operation and results during fiscal year. Continued work with Local Sponsor on Engineering Documentation Report — validation of MnDNR report, including project definition, environmental compliance, and budget support. Total FY04 Federal costs were \$47,035 and non-Federal costs were \$6,143.

Condition at the end of the fiscal year. District remains ready to complete Engineering Documentation Report.

20. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Flood control projects turned over to local interests were inspected to determine that project channels are kept clean and unobstructed, dikes and revetments are in good condition, and structures are in good repair and operable. Deficiencies, if any, were minor unless noted.

(See Table 16-J on inspection of completed flood control projects.)

Cost for the period was \$157,952. Total cost to Sep. 30, 2004 is \$2,824,590.

21. PROTECTION OF NAVIGATION

During FY04, operation and maintenance costs were \$2,999 at Little Falls, MN (Section 3), \$16,166 on Project Condition Surveys and \$114,077 for Waterborne Commerce Statistics.

22. OTHER WORK UNDER SPECIAL AUTHORITY

In the Sign Standards Programs (as described in Chap. 6, ER 1130-2-500) there were costs of \$189,812. In the Anti-Terrorism/Force Protection Program (Emergency Supplement) there were costs of \$0.

23. FLOOD CONTROL AND COASTAL EMERGENCIES (FC & CE)

Disaster Preparedness	\$ 393,905
Emergency Operations	501,637
Rehabilitation and Inspection Program	120,587
Advanced Measures	414,020
Hazard Mitigation	<u>18,166</u>
Total FC & CE	\$1,448,315

24. NATIONAL EMERGENCY PREPAREDNESS PROGRAM (NEPP)

National Mobilization	<u>\$ 10,362</u>
Total NEPP	\$10,362

25. REGULATORY FUNCTIONS PROGRAM

Permit Evaluation	\$4,738,003
Enforcement	485,082
Environmental Impact Statements	119,087
Compliance	153,630
Administrative Appeals	<u>3,442</u>
Total Regulatory	\$5,499,244

General Investigations

26. SURVEYS

Fiscal year cost was \$1,488,924 which included nine special studies, miscellaneous activities, and coordination with both Federal and non-Federal agencies. Table 16-N provides a specific list and respective fiscal year expenditures.

27. COLLECTION AND STUDY OF BASIC DATA

Fiscal year cost was \$170,031 which included the items concerning international water studies, floodplain Management services and hydrologic studies. Table 16-N provides a specific list and respective fiscal year expenditures.

28. ADVANCE ENGINEERING AND DESIGN

Fiscal year cost was \$115,385 which included two local protection projects. Table 16-N provides a specific list and respective fiscal year expenditures.

TABLE 16-A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY01	FY02	FY03	FY04	Total Cost to Sep. 30, 2004
2.	Reservoirs at Headwaters of Mississippi River, MN	New Work: Approp. Cost	0 0	0 0	0 0	0 0	4,398,628 4,398,628 ¹
		Maint: Approp. Cost	3,905,242 3,843,046	4,046,500 4,071,888	4,531,029 4,587,113	4,179,620 4,141,417	75,568,140 75,525,999 ²
		Maj. Rehab: Approp. Cost	0 0	0 0	0 0	0 0	425,000 425,000
		Dam Safety: Approp. Cost	2,885,000 2,806,553	1,711,000 1,846,601	140,000 137,137	-2,000 5,127	11,059,000 11,059,000
	(Contributed Funds) ROPE Study	New Work: Contrib. Cost	0 0	0 0	150,000 48,646	0 85,182	150,000 133,828
5.	Breckenridge, MN	New Work: Approp. Cost	675,000 414,022	622,000 880,685	1,736,000 1,631,054	4,688,140 4,795,532	8,251,140 8,251,112
	(Contributed Funds)	New Work: Contrib. Cost	225,000 118,503	275,000 175,861	0 227,040	642,000 140,607	1,548,500 989,922
6.	Brooklyn Center Sewer Line, Mississippi River, MN (Contributed Funds)	New Work: Approp. Cost	20,000 12,911	31,200 37,953	42,000 42,319	439,000 437,320	532,200 530,503
		New Work: Contrib. Cost	0 0	0 0	0 3,022	14,007 122,559	126,707 126,512
7.	Chaska, MN	New Work: Approp. Cost	-50,000 -60,684	-7,000 28,176	30,000 30,532	0 0	31,237,000 31,234,649 ³
	(Contributed Funds)	New Work: Contrib. Cost	0 3,503	0 0	0 -11,957	0 7,896	4,305,000 4,300,898 ⁷
8.	Crookston, MN	New Work: Approp. Cost	1,338,000 904,104	592,000 1,026,901	2,316,000 2,302,533	1,852,000 1,862,806	6,968,000 6,964,852
	(Contributed Funds)	New Work: Contrib. Cost	0 36,141	326,000 321,133	644,000 671,807	590,000 418,138	1,858,000 1,675,403
9.	Grafton, Park River, ND	New Work: Approp. Cost	778,000 598,694	-67,000 110,667	193,000 174,678	120,000 165,364	1,124,000 1,122,162
	(Contributed Funds)	New Work: Contrib. Cost	313,000 0	0 218,219	0 48,622	38,000 241	351,000 267,055

TABLE 16-A **COST AND FINANCIAL STATEMENT**
(Continued)

See Section In Text	Project	Funding	FY01	FY02	FY03	FY04	Total Cost to Sep. 30, 2004
10.	Grand Forks, ND- East Grand Forks, MN	New Work: Approp. Cost	13,271,000 12,901,587	34,210,000 35,209,964	47,238,000 47,290,726	30,802,000 30,842,174	138,991,000 138,968,044
	(Contributed Funds)	New Work: Contrib. Cost	2,307,913 1,197,206	9,919,000 5,042,915	9,490,087 10,033,354	3,720,000 6,882,487	26,037,000 23,155,963
11.	Homme Lake and Dam, ND	New Work: Approp. Cost	0 0	0 0	0 0	0 0	1,419,097 1,419,097 ⁴
		Maint: Approp. Cost	187,671 188,968	172,600 172,774	163,024 160,794	173,807 153,308	5,095,158 5,071,188
		Dam Safety: Approp. Cost	3,734,000 3,167,886	2,683,000 3,313,976	1,495,000 1,465,820	454,000 516,002	11,844,000 11,840,629
	(Contributed Funds)	Dam Safety: Contrib. Cost	30,000 60,000	18,000 7,000	0 10,469	3,000 0	81,000 77,469
12.	Marshall, MN	New Work: Approp. Cost	754,000 720,900	-41,000 46,655	8,000 7,222	-2,000 0	9,014,000 9,013,544 ⁵
	(Contributed Funds)	New Work: Contrib. Cost	100,000 75,000	25,000 40,000	10,000 1,000	0 3,208	1,730,000 1,713,424
13.	Portage, WI	New Work: Approp. Cost	-190,000 -148,720	0 0	200,000 200,536	20,000 18,644	9,016,000 9,014,278
	(Contributed Funds)	New Work: Contrib. Cost	0 289,463	700,000 219,085	153,000 711,320	0 20,581	2,373,000 2,367,967
14.	Sheyenne River, ND	New Work: Approp. Cost	2,359,000 2,143,293	1,575,000 1,970,654	3,733,000 3,724,985	2,172,000 2,166,296	36,183,000 36,153,350 ⁶
	(Contributed Funds)	New Work: Contrib. Cost	0 0	0 0	0 0	0 0	424,318 424,318
	Horace to W. Fargo						
	(Contributed Funds)	New Work: Contrib.	263,000 252,000	152,000 165,000	449,000 449,000	489,000 481,000	2,896,000 2,887,860
15.	Wahpeton, ND	New Work: Approp. Cost	482,000 447,305	830,000 860,307	2,174,000 2,177,123	2,845,100 2,792,448	6,731,100 6,674,950
	(Contributed Funds)	New Work: Contrib. Cost	12,000 41,785	404,000 24,255	200,000 567,522	975,000 678,242	1,868,000 1,558,744

TABLE 16-A **COST AND FINANCIAL STATEMENT**
(Continued)

See Section In Text	Project	Funding	FY01	FY02	FY03	FY04	Total Cost to Sep. 30, 2004
16.	Mille Lacs Regional Wastewater, MN	New Work: Approp. Cost	0 0	16,000 15,831	30,000 21,697	0 2,760	46,000 40,288
17.	Northeastern, MN	New Work: Approp. Cost	195,000 73,166	738,000 630,617	1,515,000 801,754	286,000 1,220,880	2,734,000 2,726,417
18.	Northern, WI	New Work: Approp. Cost	0 0	0 0	55,000 50,707	1,247,000 1,239,857	1,302,000 1,290,564
19.	Lower St Anthony Falls, Rapids Restoration, MN (Contributed Funds)	New Work: Approp. Cost	225,000 45,130	1,198,000 356,304	-385,000 421,464	-165,000 47,137	873,000 870,035
		New Work: Contrib. Cost	0 0	333,000 0	0 267,301	0 6,143	333,000 273,444

1. Includes \$681,805 for new work for previous project.
2. Includes \$100,857 for maintenance for previous projects and MO of Dams funds of \$126,391.
3. Excludes \$744,114 in other contributed funds that have been expended for betterments.
4. Excludes \$56,220 contributed funds. Includes \$23,000 expended during FY91-FY95 under Section 1135, Public Law 99-662 authority.
5. Excludes \$1,802,866 for previous project. Includes \$372,000 CP&E funds obligated prior to 1 Oct 85 which remains excluded from the project cost estimate.
6. Excludes \$1,150,000 sunk costs for deauthorized Kindred Lake unit (see Table 16-G). Excludes \$475,000 for costs associated with inactive Maple River unit.
7. Excludes \$5,886 in other contributed funds that have been expended for betterments.

TABLE 16-B

See Sec. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
2.		RESERVOIRS AT HEADWATERS OF MISSISSIPPI RIVER, MN	
	March 3, 1899	Reconstruct 4 of the 5 original dams and surveys to determine extent of lands overflowed by reservoirs.	
	March 2, 1907	Reconstruct Sandy Lake Dam and construct Gull Lake Reservoir.	
	June 25, 1910	Construct an equalizing canal between Winnibigoshish and Leech Lake Reservoirs (no work was done and this part of the project abandoned in Act of Mar. 4, 1915).	H. Doc. 363, 61 st Cong., 2 nd sess.
	July 27, 1916	Abandonment of ditches connecting Long Lake, Round Lake, and Gull Lake.	H. Doc. 413, 64 th Cong., 1 sess. ¹
	June 26, 1934 ²	Operation and maintenance provided for with funds from War Department appropriations for rivers and harbors.	
5.	June 30, 1948	BRECKENRIDGE, MN	Sec 205 1948 Flood Control Act, as amended
	Dec. 11, 2000		2000 WRDA – Public Law 106-541
6.	July 24, 1946	BROOKLYN CENTER SEWER LINE, MISSISSIPPI RIVER, MN	Sec 14 1946 Flood Control Act, as amended
7.	March 6, 2002		
	October 22, 1976	CHASKA, MN	1976 WRDA – Public Law 94-587
	Nov. 17, 1986	Cost Sharing provisions	1986 WRDA – Public Law 99-662
8.	August 17, 1999	CROOKSTON, MN	1999 WRDA – Public Law 106-53
9.	Nov. 17, 1986	GRAFTON, PARK RIVER, ND	1986 WRDA – Public Law 99-662
	Nov. 18, 1991		Deauthorization
	August 17, 1999		1999 WRDA – Public Law 106-53 (Reauthorization)
10.	October 21, 1998	GRAND FORKS, ND AND EAST GRAND FORKS, MN	Public Law 105-277, OMNIBUS Appropriation Bill, FY 99
11.		HOMME LAKE AND DAM, ND	
	December 22, 1944	Authorized as Park River Reservoir	1944 Flood Control Act (S. Doc. 194, 78 th Cong., 2d sess.)
		Redesignated Homme Reservoir and Dam	Public Law 435 (80 th Cong. 2d sess.)
	November 17, 1986	Project restoration of wetland habitat conditions	Sec 1135 1986 WRDA – Public Law 99-662
12.	November 17, 1986	MARSHALL, MN	WRDA 1986 – Public Law 99-662, Sec 401(a)
	November 17, 1988		WRDA 1988 – Public Law 100-676

TABLE 16-B

See Sec. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
13.	November 17, 1986	PORTAGE, WI	WRDA 1986 – Public Law 99-662
14.	November 17, 1986	SHEYENNE RIVER, ND Project shall include a dam and reservoir of approximately 35,000 acre-feet of storage for the purpose of flood protection Maple River.	WRDA 1986 – Public Law 99-662
15.	June 30, 1948	WAHPETON, ND	Sec 205 1948 Flood Control Act, as amended
16.	October 31, 1992	MILLE LACS REGIONAL WASTEWATER, MN	WRDA 1992, as amended by Sec 108(d) of the Consolidated Appropriations Act of 2001 (Public Law 106-554)
17.	August 17, 1999	NORTHEASTERN, MN	1999 WRDA – Public Law 106-53, Sec 569
18.	December 15, 2000	NORTHERN, WI	Sec 154 2001 Consolidated Appropriations Act (Public Law 106-554)
19.	December 11, 2000	LOWER ST. ANTHONY FALLS, RAPID RESTORATION, MN. Authorizes design and construction of a Whitewater Park in Minneapolis in accordance with June 1999 DNR feasibility report. \$10 million authorization with 65/35 cost sharing.	2000 WRDA – Public Law 106-541, Sec 527

1. Contains latest published map.

2. Permanent Appropriations Repeal Act.

TABLE 16-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report for	Cost To September 30, 2004	
			Construction	Operation and Maintenance
Baudette Harbor, MN	Completed	1961	\$36,415	57,768
Black River, WI	¹	1950	67,585	--
Lake Traverse, MN and SD	^{3,4}	1921	92	--
Minnesota River, MN	Completed	1996	2,057,722 ⁸	915,978
Mississippi and Leech Rivers, MN	Completed ³	1929	277,615	40,251
Mississippi River between Brainerd and Grand Rapids, MN	⁵	1925	47,794	3,891
Pine Creek, Angle Inlet, MN	Completed	1978	38,700	102,196
Red Lake and Red Lake River, MN	Completed ³	1923	9,070	--
Red River of the North, MN and ND	^{3,6}	1921	293,344	76,209
St. Croix River, MN and WI	Completed	1991	150,410	1,185,011
Warroad Harbor and River, MN	Completed	1996	86,105	2,159,833
Wisconsin River, WI	^{2,3}	1888	--	--
Zippel Bay Harbor, MN	Inactive	1928	27,941	11,139
Zippel Bay, Lake of the Woods County, MN	Completed	1996	515,000	63,941

1. Existing channel adequate for commerce (see Table 16-G for deauthorized portion of project.)
2. Originally included in project `Fox and Wisconsin River, WI'. Abandonment of improvement of Wisconsin River by channel contraction works recommended in 1886 and 1887 (H. Doc. 65, 49th Cong., 2nd sess.) Expenditures included under `Fox and Wisconsin Rivers, WI'. No breakdown available.
3. No commerce reported.
4. Abandonment recommended in 1915 (H. Doc. 439, 64th Cong., 1st sess.) and June 24, 1926 (H. Doc. 467, 69th Cong., 1st sess.)
5. Abandonment recommended June 24, 1926 (H. Doc. 467, 69th Cong., 1st sess.)
6. Abandonment recommended in 1915 (H. Doc. 1666, 63d Cong., 3d sess.)
7. Abandonment recommended June 24, 1926 (H. Doc., 69th Cong., 1st sess.)
8. Includes \$117,542 for new work for previous project.

16-17

TABLE 16-E
(Continued)

**OTHER AUTHORIZED FLOOD
CONTROL PROJECTS**

Project	Status	For Last Full Report See Annual Report for	Cost To September 30, 2004	
			Construction	Operation and Maintenance
Prairie du Chien, WI	Completed	1991	3,529,000	--
Red Lake River at Gentilly, MN	Completed	1991	311,000 ²⁸	--
Red Lake River at Huot, MN ²	Completed	1984	64,500	--
Red Lake River at Red Lake Falls, MN ²	Completed	1984	131,000	--
Red Lake River, MN including Clearwater River, MN	Completed	1996	3,120,079 ²⁹	3,502,999
Red Lake River, Polk County, Crookston, MN ²	Completed	1997	166,400 ³⁰	--
Red Lake River, State Hwy 32, MN ²	Completed	1993	151,665 ³¹	--
Red River of the North at Argusville, ND ³	Completed	1990	1,534,000	--
Red River of the North at Breckenridge, MN ²	Completed	1990	85,665 ³²	--
Red River of the North at Breckenridge, MN ²	Completed	--	27,500	--
Red River of the North Drainage Basin, MN SD, & ND	Completed	1997	8,322,112 ³³	15,166,637
Red River of the North at Fargo, ND-Moorhead, MN ⁴	Completed	1992	226,500 ³⁴	--
Red River of the North, Fargo Public Facilities, ND	Completed	2002	1,342,821 ⁵⁹	--
Red River of the North at Halstad, MN ³	Completed	1986	2,012,000	--
Red River of the North at Oslo, MN ³	Completed	1984	1,960,200	--
Red River of the North at Pembina, ND ³	Completed	1979	2,000,000	--
Redwood River below Marshall, MN ³	Completed	1960	202,400	--
Rochester, MN	Completed	1997	67,523,438 ⁵⁴	--
Root River at Hokah, MN ²	Completed	1992	239,627 ³⁵	--
Roseau River, MN	Completed	1996	2,341,000 ³⁶	--
Rushford, MN	Completed	1980	3,192,333	--
Sanders Creek, Boscobel, WI ³	Completed	1998	1,441,500 ³⁷	--
Shepard Road, Mississippi River, St. Paul, MN ²	Completed	1985	250,000 ³⁸	--
Sheyenne River, Valley City, ND ²	Completed	1988	111,000	--
Snake River, Alvarado, MN ³	Completed	1997	1,761,000 ³⁹	--
Sogn, MN	Completed	1996	47,400 ⁴⁰	--
Souris River Basin, ND	Completed	2003	109,260,000 ⁶⁴	--
Souris River, Velva, ND ²	Completed	1988	137,500	--
State Hwy 7 Bridge, Pomme de Terre River, Appleton, MN	Completed	2002	239,903 ⁶³	--
State Road and Ebner Coulees, WI	Completed	1996	21,435,000 ⁴¹	--
Sterling Center, MN ²	Completed	1997	160,900 ⁴²	--
St. Cloud, MN	Completed	2002	998,814 ⁶⁰	--
St. Croix River, Stillwater, MN	Completed	2002	5,061,550 ⁶¹	--
St. Hilaire, MN	Completed	1996	141,100 ⁴³	--
St. Paul, MN	Completed	2002	13,897,500 ⁶²	--
St. Paul and South St. Paul, MN	Completed	1974	8,476,012 ⁴⁴	--
Upper Iowa River, IA	Completed	1964	888,445	--
Velva, ND ³	Completed	1970	334,628	--
Vermillion River, Hastings, MN ³	Completed	1980	999,900	--
Veteran's Memorial Levee, Mississippi River, Hastings, MN ²	Completed	1985	182,000	--
Wabasha County, County Hwy 11, MN ²	Completed	1995	273,000 ⁴⁵	--

**TABLE 16-E
(Continued)****OTHER AUTHORIZED FLOOD
CONTROL PROJECTS**

Project	Status	For Last Full Report See Annual Report for	Cost To September 30, 2004	
			Construction	Operation and Maintenance
Wabasha, Mississippi River, MN ²	Completed	1993	113,700 ⁴⁶	--
Warner Road, Mississippi River, St. Paul, MN ²	Completed	1987	250,000	--
Warner Road, Sibley Street, Mississippi River, St. Paul MN	Completed	1992	500,000 ⁴⁷	--
Wild Rice River, Hendrum/Lee, MN ³	Completed	1997	383,300 ⁴⁸	
Wild Rice River, Mahnomon County, MN ²	Completed	1986	58,500	--
Wild Rice River, Mahnomon, MN ⁴	Completed	--	86,568	--
Wild Rice River, South Branch and Felton Ditch, MN	Completed	1989	5,620,700	--
Winona, MN	Completed	1989	32,741,131 ⁴⁹	--
Zumbro River at Genoa, MN ²	Completed	1992	34,500 ⁵⁰	--
Zumbro River, MN	Completed	1975	1,284,100	--
Zumbro River at Jarrett and Millville, MN ²	Completed	1990	141,440 ⁵¹	--

1. Excludes \$152,492 contributed funds. In addition, \$487,491 in other contributed funds have been expended for work under Government contract paid for by the Ottertail Power Company.
2. Project authorized by Chief of Engineers under small project authority, Section 14, Flood Control Act of 1946, as amended.
3. Project authorized by Chief of Engineers under small project authority, Section 205, Flood Control Act of 1948, as amended.
4. Project authorized by Chief of Engineers under small project authority, Section 208, Flood Control Act of 1954, as amended.
5. Preconstruction planning has not started. Phase I completed under General Investigations.
6. Excludes \$56,453 contributed funds.
7. Excludes \$18,362 contributed funds.
8. Excludes \$42,766 contributed funds.
9. In addition \$87,878 was expended from Public Law 99 funds in the spring of 1969 for emergency protection and incorporation into the permanent project.
10. Excludes \$201,544 contributed funds.
11. Excludes \$150,191 contributed funds.
12. Excludes \$12,749 contributed funds.
13. Excludes \$27,583 contributed funds.
14. Excludes \$77,290 contributed funds.
15. Excludes \$20,441 contributed funds.
16. Advance engineering and design costs only. Project deferred with authorization of Souris River Basin Project (see Section 25 and Table 16-A for costs for active project).
17. Excludes \$74,225 contributed funds.
18. Excludes \$46,034 for the Ruffy Brook unit for which authorization expired in April 1966 (see Table 16-G). Excludes \$246,911 contributed funds.
19. Excludes \$35,000 contributed funds.
20. Excludes \$79,749 contributed funds.
21. Excludes \$91,218 contributed funds.
22. Excludes \$59,855 contributed funds.
23. Excludes \$68,421 contributed funds.
24. Excludes \$307,239 contributed funds.
25. Excludes \$130,300 contributed funds.
26. Excludes \$4,167 contributed funds.
27. Excludes \$20,920 contributed funds.
28. Excludes \$92,402 contributed funds.
29. Excludes \$30,020 contributed funds.
30. Excludes \$33,000 contributed funds.

TABLE 16-E
(Continued)

**OTHER AUTHORIZED FLOOD
CONTROL PROJECTS**

31. Excludes \$35,430 contributed funds.
32. Excludes \$26,055 contributed funds.
33. Includes cost of the Wahpeton-Breckenridge unit \$11,239, which is classed as "deferred" and the units on which authorization has expired: Maple River, \$1,241; Moorehead, \$27,700; which Sheyenne, \$37,956. In addition, \$203,874 special deposit funds and \$146,160 in other contributed funds have been expended for work under government contract paid for by local interests. Includes \$184,352 expended on Orewll Lake between FY91 - FY96 under Section 1135, Public Law 99-662 authority. Excludes \$64,775 contributed funds under Section 1135, PL 99-662 authority.
34. Excludes \$61,895 contributed funds.
35. Excludes \$67,014 contributed funds.
36. Excludes \$65,902 contributed funds.
37. Excludes \$175,357 contributed funds.
38. Excludes \$62,620 contributed funds.
39. Excludes \$100,000 contributed funds.
40. Excludes \$5,253 contributed funds.
41. Excludes \$225,000 sunk costs for inactive Ebner Coulee unit (see Table 16-E) and \$4,206,836 contributed funds.
42. Excludes \$39,815 contributed funds.
43. Excludes \$31,064 contributed funds.
44. Excludes \$545,637 contributed funds for new work and \$38,000 expended by South St. Paul for work in lieu of required cash contribution. Excludes an additional \$206,629 expended for work done at request of local interests.
45. Excludes \$73,619 contributed funds.
46. Excludes \$37,631 contributed funds.
47. Excludes \$184,709 contributed funds.
48. Excludes \$97,800 contributed funds.
49. Excludes \$589,316 contributed funds. In addition, \$717,809 in other contributed funds have been expended for work under Government contract paid for by local interests.
50. Excludes \$11,066 contributed funds.
51. Excludes \$38,173 contributed funds.
52. Excludes \$20,000 contributed funds.
53. Excludes \$777,070 contributed funds.
54. Excludes \$7,628,650 contributed funds.
55. Excludes \$177,500 contributed funds.
56. Excludes \$114,000 contributed funds.
57. Excludes \$2,083,373 contributed funds.
58. Excludes \$455,000 contributed funds.
59. Excludes \$674,000 contributed funds.
60. Excludes \$670,000 contributed funds.
61. Excludes \$1,395,000 contributed funds.
62. Excludes \$3,418,460 contributed funds.
63. Excludes \$106,800 contributed funds.
64. Excludes \$8,180,000 contributed funds.

TABLE 16-G DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Federal Funds Expended	Contributed Funds Expended
Black River, WI ¹	1950	Aug. 5, 1977	--	--
Black River Lake, WI	1950	Aug. 5, 1977	--	--
Bois de Sioux and Red River, Wahpeton, MN—Breckenridge, MN ⁸	1981	Apr. 16, 2002	\$ 11,239	--
Burlington Dam, Souris River, ND	1983	Mar. 10, 1995	5,568,600 ²	--
Grafton, ND ³	1983	Nov. 18, 1991	--	--
Hudson Harbor, WI ⁴	1986	Nov. 17, 1986	--	--
Kindred Lake, ND ⁵	1987	Nov. 17, 1986	1,150,000	--
La Crosse, WI ⁶	1983	Nov. 17, 1986	--	--
Lake Darling Dam, ND	1987	Sep. 13, 1994	4,919,000 ⁷	--
Maple River, ND ⁸	1981	Oct. 6, 1961	1,241	--
Moorhead, MN ⁸	1981	Oct. 30, 1961	27,700	--
Pembina River Lake, ND	1950	Jan. 1, 1990	50,000	--
Ruffy Brook, MN	1967	Apr. 1966	46,034	--
Sheyenne River, ND ⁸	1981	Dec. 31, 1970	37,956	--
Sheyenne River, Maple River Reservoir, ND	1988	Apr. 16, 2002	475,000	--
State Road and Ebner Coulees (Ebner Coulee Unit)	1981	Jul. 9, 1995	225,000	--
Tongue River Lake, ND	1950	Jan. 1, 1990	23,695	--
Twin Valley Lake, Wild Rice River, MN	1988	Apr. 16, 2002	2,115,700	--
Warroad River and Bulldog Creek, MN	1974	Nov. 17, 1986	182,000	--
Warroad Harbor and River, MN ⁹	1981	Aug. 5, 1977	--	--

1. Portion of project for removal of obstructions at various points outside the dredged area to clear channel to full project width (see Table 16-C for costs for completed portion of the project).
2. Advance engineering and design costs only. The Senate Report 97-256 states that the Corps is to take no further action to construct Burlington Dam until directed to do so by Congress.
3. Grafton, ND, was reauthorized by Section 364 of WRDA in 1999.
4. Part of the St. Croix River, Minnesota and Wisconsin project.
5. Previously part of Sheyenne River, ND project (see Section 23 and Table 16-A for costs for active project).
6. Authorized for further study by a House Committee on Public Works Resolution dated March 15, 1988.
7. Advance engineering and design costs only. (See Section 25 and Table 16-A for costs for active project).
8. Part of Red River of the North Drainage Basin (see Section 20 in text and Table 16-I for costs for active units of project).
9. Portion of dredging of entrance channel and turning basin to complete project width and depth (see Table 16-C for costs for completed portion of project).

TABLE 16-H

RESERVOIRS AT HEADWATERS OF MISSISSIPPI RIVER
See Section 2 of Text)

Reservoir	Minimum Stages (feet) ¹	Outlet River	Watershed Area (Square miles)			Reservoir	Capacity at Maximum Stage (acre-feet)	<u>Previous Projects</u>		<u>Existing Projects</u>		Total Cost
			Above St. Paul (miles)	Watershed (Square miles)	Original Lake			Completed	Cost	Completed	Cost	
Winnibigoshish	6	Mississippi	408	1442	117	179.4	967,930	1884	\$214,000	1900	\$173,470	\$387,470
Leech Lake	0	Leech	410	1163	173	205.9	743,320	1884	171,805	1902	84,380	256,185
Pokegama	6	Mississippi	344	660 ²	24	35.0	120,750	1884	85,000	1904	126,030	211,030
Sandy Lake	7	Sandy	267	421	8	16.6	72,500	1895	114,000	1909	117,020	231,020
Pine River	9	Pine	199	562	18	23.7	177,520	1886	97,000	1907	133,320	230,320
Gull Lake	5	Gull	168	287	20	20.5	70,820	--	--	1913	86,826	86,826
Surveys and flowage rights							--	--	--	--	160,939	160,939
Recreational facilities							--	--	--	--	2,834,838	2,834,838
Total new work							--	--	681,805	--	3,716,823	4,398,628
Total operating and care							--	100,857	--	68,868,415 ³	68,969,272	
Permanent indefinite appropriation for operation and care, Feb. 1, 1895 to end of fiscal year 1936							--	--	--	--	967,197	967,197
Rehabilitation							--	--	--	--	425,000	425,000
Total							2,152,840	--	\$782,662	--	\$73,977,435	\$74,760,097

1. Lower operating limits by regulations approved February 4, 1936, as modified December 29, 1944.

2. Exclusive of area controlled by Winnibigoshish and Leech Lake Dams.

3. Includes \$126,391 from Approp. 96X5125, M&O Dams.

**TABLE 16-I RED RIVER OF THE NORTH DRAINAGE BASIN:
ACTIVE UNITS IN COMPREHENSIVE BASIN PLAN**

	State	Type	Cost to Sep. 30, 2004	Total Estimated Federal Cost
Orwell River (Otter Tail River)	Minnesota	Reservoir	\$1,916,753	\$1,916,700 ¹
Wild Rice and Marsh Rivers	Minnesota	Channel improvement	405,056	405,100
Rush River	North Dakota	Channel improvement	287,686	287,700
Sand Hill River	Minnesota	Channel improvement	548,778	548,800
Mustinka River	Minnesota	Channel improvement	440,788	440,800
Otter Tail River	Minnesota	Channel improvement	174,768	174,800
Red River at Grand Forks	North Dakota	Levees and floodwall	948,895	948,900
Red River at East Grand Forks	Minnesota	Levees, floodwall, pumping plants	1,698,200 ²	1,698,200 ³
Red River at Fargo	North Dakota	Channel improvement	1,639,924	1,639,900 ⁴
Total Cost to Date			\$8,060,848 ⁵	
Total Estimate Cost				\$8,060,900 ⁶

1. Includes \$181,713 for lands and \$25,045 for recreation facilities.

2. Excludes cost for current planning, engineering and design work.

3. The East Grand Forks unit was reclassified from active to inactive on August 19, 1988; the project was reactivated in June 1997. The cost of this unit was last revised in 1987. A new flood control plan for a combined Grand Forks-East Grand Forks project was authorized in 1999.

4. Includes \$67,900 for lands.

5. Costs of \$11,239 for the Wahpeton-Breckenridge deauthorized unit not included. Authorization of the Sheyenne River, Moorhead, and Maple River units has expired. Cost of these units also not included total \$66,897.

6. The Wahpeton-Breckenridge unit of the project is classed as deauthorized and is excluded from the estimate. The cost of this unit, last revised in 1955, was estimated to be \$666,000. The Flood Control Act approved December 31, 1970 (H. Doc. 330-91-2) provided for deletion of the Sheyenne River unit, and authorization of the Maple River and Moorhead units expired at the end of the 5-year period within which local interests were required to furnish assurances of local cooperation. Authorization of these units, not included, expired on the dates indicated in Table 16-G. In FY 89, the Wahpeton-Breckenridge unit was included as part of the General Investigation program under Restudy of Deferred projects.

TABLE 16-J INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS
(See Section 27 of Text)

Project	Date Inspected
<hr/>	
Black Bear & Miller Lake, Crow Wing Co. - MN.....	August 2004
Chaska, MN.....	September 2004
Devils Lake, ND.....	July 2004
Dry Run, Decorah, IA.....	August 2004
Elk River, MN.....	November 2003
Emerson, Manitoba - Noyes, MN.....	September 2004
Enderlin, Maple River, ND.....	July 2004
Gilmore Creek, Winona, MN.....	August 2004
Guttenberg, IA.....	August 2004
Middle River at Argyle, MN.....	September 2004
Mines Creek, Spring Valley, WI.....	September 2004
Minneota, MN.....	August 2004
Minnesota River at Henderson, MN.....	September 2004
Minnesota River, Mankato, MN.....	August 2004
Minnesota River, North Mankato, MN.....	August 2004
Minot, ND.....	August 2004
Mississippi River, near Aitkin, MN.....	August 2004
Plum Creek, New Haven Townshhip, MN.....	September 2004
Prairie du Chein, WI.....	September 2004
Red River of the North at Argusville, ND.....	July 2004
Red River of the North at Fargo, ND - Moorhead, MN.....	July 2004
Red River of the North at Halstad, MN.....	July 2004
Red River of the North at Oslo, MN.....	September 2004
Red River of the North at Pembina, ND.....	September 2004
Redwood River at Marshall, MN.....	August 2004
Rochester, MN.....	September 2004
Root River at Houston, MN.....	September 2004
Rushford, MN.....	July 2004
Sanders Creek, Boscobel, WI.....	September 2004
Snake River at Alvarado, MN.....	September 2004
Souris River Basin, ND.....	August 2004
Souris River - Burlington to Minot, ND.....	August 2004
Souris River - Renville, County Park, ND.....	August 2004
Souris River - Rural Improvements, ND.....	August 2004
Souris River - Sawyer, ND.....	August 2004
Souris River, Velva, ND.....	August 2004
State Road & Ebner Coulee, La Crosse, WI.....	September 2004
Trempealeau River - Arcadia, WI.....	September 2004
Upper Iowa River, IA.....	September 2004
Vermillion River, Hastings, MN.....	September 2004
Winona, MN.....	August 2004
Zumbro River, Kellogg MN.....	August 2004

TABLE 16-K

**FLOOD CONTROL WORK UNDER
SPECIAL AUTHORIZATION**

**Flood control activities pursuant to Section 205, Public Law 858,
80th Congress, as amended (preauthorization)**

Study/Project and Location	Fiscal Year Costs
Aitkin, MN.....	\$56,046
Amenia, ND.....	103
Benton County, MN.....	15,947
Chippewa River at Montevideo, MN.....	490,532
Crookston, MN.....	45,997
Delano, MN.....	22,491
Drayton, ND.....	42,645
Fargo, Ridgewood Addition, ND.....	25,477
Houston, MN.....	-15,756
Lac Qui Parle River, Dawson, MN.....	193,080
LaCrosse, WI.....	8,402
Marsh Creek Site 6, MN.....	788
Minnesota River, Jordan, MN.....	754
Minnewaukan, ND.....	13,842
Mississippi River, Newport, MN.....	23,027
Pembina River, Neche, ND.....	1,916
Red River of the North, Oakport, MN.....	-73,659
Section 205 Coordination.....	20,013
Wahpeton, ND.....	2,792,448

Emergency bank protection

(Section 14 of the 1946 Flood Control Act, Public Law 526, 79th Congress)

Study/Project and Location	Fiscal Year Costs
Aitkin County State Aid, Hwy. 10, MN.....	\$2,820
Brooklyn Center Sewer Line, MN.....	437,320
Chippewa River, Big Bend Lutheran Church, MN.....	52,125
Fargo Public Facilities, ND.....	3,778
Minnesota River, Shakopee, MN.....	3,367
Pug Hole Lake, MN.....	14,237
St. Cloud, MN.....	1,186
Section 14 Coordination.....	15,504
Wabasha County, MN.....	228
Winona High Bridge, MN.....	4,400

**TABLE 16-L PROJECT MODIFICATIONS FOR IMPROVEMENT
OF ENVIRONMENT**

Modifications of projects for the purpose of improving the quality of the environment in the public interest (Section 1135, Public Law 99-662, 99th Congress, as amended)

Study/Project and Location	Fiscal Year Costs
Coordination account funds	\$ 6,035
Eau Galle River, WI	17,830
Ruffy Brook, Clearwater River, MN	1,215
Sand Hill River, MN.....	5,238
Wild Rice Restoration, MN	6,563

TABLE 16-M AQUATIC ECOSYSTEM RESTORATION
Restorations of Aquatic Ecosystems pursuant to Section 206, Public Law 104-303

Study/Project and Location	Fiscal Year Costs
Christine and Hickson Dams, MN	\$8,404
Coordination account funds	14,984
Drayton Dam, ND.....	106
Grand Marais River, MN	1,006
Hay Creek, Roseau County, MN	463,607
North Ottawa, MN	42,878
Paint Creek, Allamakee County, IA.....	5,734
Red River of the North, Fargo South Dam, ND	539,139
Red River of the North Fishways, ND & MN.....	5,089
Swan River, Trout Lake, MN	26,569

TABLE 16-N

GENERAL INVESTIGATIONS
(See Sections 30, 31, and 32 of Text)

Study/Project and Location	Fiscal Year Costs
Studies	
Baraboo River, WI	\$ 56,739
Devils Lake, ND.....	17
Minnesota River Basin, MN & SD.....	123,198
Red River of the North, ND	34,904
Roseau River, MN ¹	322,916
Upper Mississippi River from Lake Itasca, MN.....	118
Watershed/Comprehensive Feasibility Studies	671,655
Miscellaneous Activities	
Special Investigations.....	38,760
FERC Licensing Activities.....	6,776
Inter Agency Water Resources Development.....	43,697
North American Waterfowl Management Plan	1,559
Coordination with Other Agencies	
Cooperation with Other Water Resource Agencies	5,516
Planning Assistance to States ² :	
Minnesota.....	164,675
Wisconsin.....	18,394
TOTAL SURVEYS	\$1,488,924
COLLECTION AND STUDY OF BASIC DATA	
International Water Studies	\$ 34,972
International Joint Commission, Red River of the North	975
Flood Plain Management Services Unit	35,226
Technical Services, General	52,051
Quick Responses	6,559
Special Studies	24,991
Hydrologic Studies	15,257
TOTAL COLLECTION AND STUDY OF BASIC DATA	\$170,031
PRECONSTRUCTION ENGINEERING AND DESIGN	
Devils Lake Outlet, ND.....	\$115,283
Lower St. Anthony Falls Rapids Restoration, MN	101
TOTAL PRECONSTRUCTION ENGINEERING AND DESIGN.....	\$115,384

1. Excludes \$275,000 contributed funds.

2. Excludes \$45,775 contributed funds.

MISSISSIPPI RIVER BETWEEN THE MISSOURI RIVER AND MINNEAPOLIS, MN

Section of river covered in this report is divided into three reaches, under supervision and direction of District Engineers at St. Louis, Rock Island, and St. Paul. Section in St. Louis District extends 105 miles from Mouth of Missouri River to Upper Mississippi River mile 300 above Ohio River; Rock Island District extends about 314 miles from mile 300 to 614; and St. Paul District extends about 244 miles from mile 614 to Soo Line Railroad bridge, Minneapolis (mile 857.6).

Location. Mississippi River rises in northern Minnesota, flows about 2,360 miles southerly and empties into Gulf of Mexico. Portion included in this report extends about 663 miles from mouth of Missouri River to Soo Line Railroad bridge, Minneapolis. The latest map and profile showing this section of river are in House Document 669, 76th Congress, 3d session. A map showing Lake Pepin is in House Document 511, 79th Congress, 2d session. A map of section Minneapolis to Dubuque is in House Document 515, 79th Congress, 2d session. A map showing location of drainage districts (Bellevue, Iowa, to Missouri River) is in River and Harbors Committee Document 34, 75th Congress, 1st session.

Previous projects. See page 1199 of Annual Report for 1963.

Existing project. Provides a channel of 9-foot depth and adequate width between mouth of Missouri River (1,179 miles from the gulf) and Soo Line Railroad at Minneapolis, by construction of a system of locks and dams, supplemented by dredging. Project also provides for further improvements at St. Paul to provide a 2.7 mile basin extending downstream from Robert Street Bridge, and at Minneapolis to provide adequate terminal facilities, and for other harbor improvements and miscellaneous work. Pertinent data on locks and dams, harbor improvements, additional features entering into cost of project, and authorizing legislation are given in Tables 17-C, 17-D, 17-E, and 17-G. All dams are concrete. Three dams (Upper St. Anthony Falls, 1 and 19) are fixed, remainder are movable. See House Document 669, 76th Congress, 3d session, for a report of Chief of Engineers dated February 27, 1940, containing a general plan for improvement of Mississippi River between Coon Rapids Dam and mouth of Ohio River

for purposes of navigation, power development, flood control, and irrigation needs.

Local cooperation. Small-boat harbors authorized in the River and Harbor Act of 1962 are subject to conditions that local interests make a cash contribution toward cost of construction (except in case of Quincy Harbor which involves maintenance only of an existing harbor); furnish lands and rights-of-way for construction and future maintenance; hold the United States free from damages; provide and maintain mooring facilities and utilities; reserve accommodations for transient small boats; accomplish all necessary relocations and alterations; and establish public bodies empowered to regulate use, growth and development of the harbors.

Rectification of seepage damages to privately owned lands in the Sny Island Levee Drainage District, IL, was contingent upon the conditions that local interests acquire all lands, easements, and rights-of-way necessary for construction and maintenance of the project; comply with applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; accept, operate, and maintain the project upon its completion; and hold and save the United States free from damages arising from the construction and operation of the completed project; provided further that the local public entity shall be reimbursed by the Government in the amounts actually expended by it in the acquisition of real estate and for payments required under Public Law 91-646 if said amounts have been previously submitted to and approved by the Government.

Local cooperation requirements have been complied with for improvement of commercial harbor at Dubuque, IA; for improvement of Beaver Slough at Clinton, IA, for navigation; and for general navigation facilities at small-boat harbors at Rock Island, IL; Hannibal, MO; Fort Madison, IA; Davenport (Lindsay Park), IA; Muscatine, IA (including freight terminal approach channel); Andalusia, IL; Warsaw, IL; Moline, IL; Clinton, IA; and Savanna, IL.

Licenses. Federal Energy Regulatory Commission collects from non-Federal licensees annually to recompensate the United States for use of government dams for generation of hydroelectric power.

Amounts collected are returned to U.S. Treasury. (See Table 17-F for license fees collected for the fiscal year.)

St. Paul District. New Work: None.

Maintenance: During fiscal year 2004, the Government pipeline dredge *William A. Thompson* removed 395,384 cubic yards of material at 7 sites. Government derrick barge *Hauser/Wade* removed 5,499 cubic yards of material at one site. Government pipeline dredge *Dubuque* removed 39,620 cubic yards of material at two sites in the main channel. A contract pipeline dredge also removed 1,270,855 cubic yards from a historically used dredge material placement site. Mechanical dredging contractors removed 196,564 cubic yards from the main channel at 13 sites. Major maintenance projects included central control building and electrical controls at Lock 9, stop log slots at Lock 3, and dam concrete repairs at dam 1 and 6.

Operating and Care: Locks and Dams were operated as required and necessary repairs were made to those and appurtenant structures. Other studies, reports, and miscellaneous engineering work were also accomplished.

Rehabilitation: The rehabilitation of the district's central control buildings continued. During FY 2004 the building and site work was substantially completed at Lock 9.

The related navigation safety and embankments problems at Lock and Dam 3 were examined in separate reports in 1995 with recommended structural fixes for these problems. The proposed projects were approved by Corps Headquarters, but have not been implemented for a number of reasons including the presence of a diverse mussel bed with state-listed endangered species in the tailwater area. Construction of the first stage of the embankment project was completed in the summer of 1999. The St. Paul District has decided to re-evaluate these related problems in an effort to find more optimal solutions. A Notice of Intent to Prepare an Environmental Impact Statement for the Lock and Dam 3 navigation safety and embankments re-evaluation was published in the Federal Register.

Alternative plans for navigation safety and embankments have been evaluated in a risk and benefit cost assessment. The reevaluation study will be completed in FY 2006.

Costs to St. Paul were \$41,352,338 for operation and maintenance and \$1,692,089 for rehabilitation; for a total cost of \$43,044,427.

Rock Island District. New Work: None.

Maintenance: Channel dredging by Government cutterhead pipeline dredge *William A. Thompson* was performed at various locations in pools 17, 18, 21 and 22 for a total of 209,600 cubic yards of material removed. Mechanical dredging was performed in pools 11, 13, 16, 18, 20, 22 and 24 for a total of 102,400 cubic yards of material being removed. The total cost of dredging was \$2,430,000. Continuing construction includes; Lock and Dam 12 Major Maintenance Stage III; repairs to Lock and Dam 15 roller gate chains and service bridge decking; repairs to lock and Dam 20, 21, 22 horizontal concrete; Lock and Dam 17 and 21 submersible dike repairs, Lock and Dam 15 checkpost and ladder repairs, and multi-site facility protection upgrades. No new construction contracts were initiated. Maintenance for navigation function continued at a cost of \$21,460,667 (includes dredging costs). Maintenance for environmental stewardship continued at a cost of \$487. Maintenance of recreation features continued a cost of \$657,764. Total costs for operation and maintenance were \$22,118,918. Net credits to the project were \$496,447; primarily as a result of collection from towboat companies for damages for lock and dam structures.

Operations for Navigation continued at a cost of \$19,183,510. Environmental stewardship continued at a cost of \$840,856. Operations for the recreation function continued at a cost of \$2,025,780. Total operations costs were \$22,050,146. Total operations and maintenance costs were \$43,672,617.

Rehabilitation: Rehabilitation was continued at Locks and Dams 11, 12, 14, and 19 for costs of \$1,062,200, \$520,097, \$244, and \$1,501, and \$1,730,130 respectively. Total rehabilitation and maintenance costs were \$3,313,929.

Costs to the Rock Island District were \$43,672,617 for operations and maintenance and \$3,313,929 for major rehabilitation for a total cost of \$46,986,546.

St. Louis District. New Work: Costs incurred for Melvin Price Locks and Dam, formerly Lock and Dam 26 replacement, were \$229,751 for buildings, grounds, and utilities; \$7,940 for engineering; \$217,727 for supervision and administration. Cost for Melvin Price totaled \$455,418. Costs incurred for the

second lock totaled \$10,631, all for engineering. Total cost for new work was \$466,049.

Rehabilitation: Major rehabilitation is complete at Lock and Dam 25, except for project closeout. FY 2004 costs totaled \$638 (all for engineering). Major rehabilitation continued at Lock and Dam 24 at a cost of \$11,402,784 for the lock; \$713,164 for engineering; and \$455,911 for supervision and administration. Costs for Lock and Dam 24 totaled \$12,571,859. Total rehabilitation cost \$12,572,497.

Operating and care: The locks and dams were operated as required and necessary repairs were made thereto. Other work accomplished was management of natural resources, operations of recreation areas, condition and operating studies, water control management, and other studies and reports for a total cost of \$7,304,601.

Maintenance: Total maintenance cost \$9,553,368.

Costs to the St. Louis District were \$466,049 for new work on the Melvin Price Locks and Dam and Second Lock; \$12,572,497 for major rehabilitation; \$16,857,969 for operation and maintenance for a total cost of \$29,896,515.

Total Federal costs of existing project to the end of the fiscal year for the three Districts were \$466,049 for new work; \$101,882,924 regular funds for operation and maintenance; and \$9,239,907 regular funds for rehabilitation. Total costs for FY 04 were \$111,588,880.

Condition of the channel at end of fiscal year: The controlling depths of nine feet at low water and minimum widths suitable for long-haul common carrier service were maintained in all pools.

St. Paul District. Work completed: Locks and Dams at St. Anthony Falls and 1 to 10, inclusive, except for relatively minor appurtenant work; major improvements of channels and harbors at St. Paul and Minneapolis; small boat harbors and commercial harbors at Lake City, Red Wing, and Winona, MN; and Prairie du Chien, WI; small-boat harbors at St. Paul, Hastings, Red Wing, Wabasha, Lake City and Winona, MN; Lansing, IA; and Bay City, Alma, Pepin, and Prairie du Chien, WI; a remedial drainage ditch at Cochrane, WI; miscellaneous channel dredging and realignment; channel markers; pool clearing; and construction of various facilities for recreation use.

Status of land and flowage acquisition: Approximately 50,723,747 acres of land in fee, including 47,305 acres used by the Department of the Interior in accordance with a Cooperative Agreement that establishes the Upper Mississippi River Fish and Wildlife Refuge.

Easements for various access rights and flowage inundation are held over 15,571.321 acres. Additionally, the district holds perpetual easements over 244.43 acres of land for small boat harbors. All land interests lay between Upper St. Anthony Falls Lock and Dam located in Minneapolis, Minnesota, and Lock and Dam 10 in Guttenberg, Iowa. The Department of the Army also holds special rights to over 62,954.74 acres of land owned by Department of the Interior in pools 3 to 10, inclusive.

Work remaining to complete portion of project in St. Paul District: FY 2005 projected acquisitions include two dredge material placement sites containing approximately 6 acres in fee.

Condition of channel at end of fiscal year: The controlling depths of 9 feet at low water and minimum depths for long-haul common carrier service were maintained in all pools.

Rock Island District. Work completed: Major construction items including all locks and dams, are completed and in operation. The following related work has also been completed: construction of small-boat harbors at Rock Island, IL; Moline, IL; Andalusia, IL; Warsaw, IL; Fort Madison, IA; Davenport (Lindsay Park), IA; Muscatine, IA; Clinton, IA; and Hannibal, MO; improvement of Beaver Slough at Clinton, IA, for navigation; improvement of commercial harbor at Dubuque, IA; rehabilitation of old auxiliary lock at Lock and Dam 14; permanent closure of old Lock 19 and dry dock; rock and conglomerate excavation in Pools 15 and 16; rectification of seepage damage in the Sny Island Levee Drainage District, IL; recreational facilities; and construction of visitor center at Lock and Dam 15.

Status of land and easement acquisition: Acquisition of land in Pools 11 to 22, inclusive consisting of 93,658.174 acres in fee and 11,694.94 acres in easement, has been completed.

Condition of the channel at end of fiscal year: The controlling depths of nine feet at low water and minimum widths suitable for long-haul common carrier service were maintained in all pools.

Work remaining to complete portion of project in Rock Island District: None.

St. Louis District. Work completed: Major construction items, including all locks and dams, are completed and in operation, with the exception of the remaining work at Melvin Price.

Status of land and flowage acquisition: Acquisitions of land in Pools 24, 25, and 26, involving 4,448 acres of land in fee and flowage easements over 6,600 acres, is complete. A total of 4,201 acres has been acquired for the Melvin Price Locks and Dam project.

Condition of channel at end of fiscal year: The controlling depth of nine feet at low water and generally suitable widths for long-haul common carrier services were maintained in all pools and between Melvin Price Locks and Dam and Missouri River.

Work remaining to complete portion of project in St. Louis District: Work remaining at the Melvin Price Locks and Dam project includes the visitor center exhibits for the main lock and implementation of remaining required fish and wildlife mitigation measures for the second lock.

TABLE 17-A COST AND FINANCIAL STATEMENT

Project	Funding	FY 01	FY 02	FY 03	FY 04	Total Cost to Sep 2004
Mississippi River between Missouri River and Minneapolis, Minnesota (Federal Funds)	New Work: ¹					
	Approp. ²	\$1,303,000	\$478,000	\$1,795,000	\$472,800	\$1,301,733,229
	Cost ³	1,191,563	831,719	1,801,508	466,049	1,260,806,160
	Maint: ⁴					
	Approp.	107,764,009	106,618,874	100,599,267	102,221,458	2,300,276,705
	Cost	104,077,592	101,058,526	97,687,404	101,882,924	2,236,008,860
	Rehab:					
	Approp.	8,545,519	10,436,994	11,587,103	9,210,735	281,371,916
	Cost	8,075,066	11,034,714	11,557,751	9,239,907	281,951,627
	(Contributed Funds)					
(Inland Waterway Trust Fund)	New Work: ⁵					
	Approp.	0	500,000	500,000	58,055	3,099,195
	Cost	0	415,000	531,687	111,368	3,099,195
	Rehab. ⁶					
	Approp.	4,265,476	8,215,090	8,844,925	8,330,903	85,303,857
	Cost:	\$3,928,451	\$8,806,402	\$8,825,272	\$8,338,607	\$80,197,404

1. Includes \$15,476,259 for new work on previous projects.

2. Includes Melvin Price Locks and Dam funds \$945,630,500.

3. Includes Melvin Price Locks and Dam funds \$945,623,057.

4. Includes \$1,949,301 for maintenance on previous project.

5. Funds from Inland Waterway Trust Fund were included in with Contributed Funds up to 1998.

6. All Inland Waterway Trust Fund.

**TABLE 17-B TOTAL COSTS OF EXISTING PROJECT
TO SEPTEMBER 30, 2004**

District	Cost	Regular Funds	Public Work Funds	Emergency Relief Funds	Total
St. Paul	New Work ¹	\$ 60,184,246 ²	\$24,210,071	\$9,071,214	\$ 93,465,531
	Maintenance ³	975,814,764	--	--	975,814,764
	Rehabilitation	105,980,164	--	--	105,980,164
	Total	1,141,979,174	24,210,071	9,071,214	1,175,260,459
Rock Island	New Work ⁴	71,307,945 ⁵	17,403,322	11,338,865	100,050,132
	Maintenance ⁶	366,819,171	--	--	366,819,171
	Rehabilitation	119,370,435	--	--	119,370,435
	Total	557,497,551	17,403,322	11,338,865	586,239,738
St. Louis	New Work ⁸	974,272,873	10,282,566	2,440,266	987,450,705
	Maintenance	400,121,699	--	--	400,121,699
	Rehabilitation	72,307,328	--	--	723,307,328
	Total	\$1,447,156,900	\$10,282,566	\$2,440,266	\$1,459,879,732

1. Excludes \$2,041,140 contributed funds. Includes \$7,673 expended in pool No. 11.

2. Includes \$159,359 transferred from Rock Island District covering pro rata share of cost of derrick boat Hercules.

3. Includes \$762,196 expended between 1930 and 1936 on operating and care of works of improvement under provisions of permanent indefinite appropriation for such purposes. Excludes \$797,670 contributed funds.

4. Excludes \$58,999 contributed funds.

5. \$687,709 was transferred to St. Louis District in fiscal year 1958. Excludes \$201,167 transferred to St. Paul and St. Louis Districts covering their pro rata share of cost of derrick boat Hercules.

6. Cost subsequent to FY 1953 included with operating and care. Includes the sum of \$395,442, expended between 1930 and 1934 on the operating and care of the works of improvement under the provisions of the permanent indefinite appropriation for such purposes.

7. Includes \$47,800 transferred from Rock Island District covering pro rata cost of derrick boat Hercules and \$687,709 transferred from Rock Island District.

8. Includes \$945,623,057 for Melvin Price Locks and Dam.

TABLE 17-C

LOCKS AND DAMS

Lock and Dam	Miles Above Ohio River	Miles from Nearest Town	Lock Dimensions			Upper Normal Pool Elevation ¹	Depth on Miter Sill		Character of Foundation Complete		Percent Locks, Dams, and Work in Pool	Year Opened to Navigation	Estimated Cost of Each Lock and Dam Including Work in Pool
			Width of Chamber (feet)	Greatest Length Available for Full Width (feet)	Lift (feet)		Upper (feet)	Lower (feet)	Lock	Dam			
St. Anthony Falls, upper Lock	853.9	In city of Minneapolis, MN	56	400	49.2	799.2	15.7	13.7	Some limestone, mainly sandstone. No piles.	Limestone.	100 ²	--	\$ 18,203,000 ³
St. Anthony Falls, lower Lock and dam	853.3	In city of Minneapolis, MN	56	400	26.9 ⁴	750.0	13.7	10.3	Sandstone. No piles	Sandstone.	100	1959	12,382,000 ⁵
Lock and dam 1	847.6	Minneapolis-St. Paul, MN	56	400	35.9 ⁴	725.1	13.5 ⁴	10.1	Rock and piles in gravel.	Piles in gravel.	100	1917	2,358,000 ⁶
Lock and dam 2	815.2	1.3 above Hastings, MN	56	400	35.9	--	12.5 ⁷	7.6	Piles in sand, silt and clay.	Piles in sand, silt and clay.	100	1930	6,492,000 ⁹
Lock and dam 3	796.9	6.1 above Red Wing, MN	110	500	12.2	687.2	16.0	15.1	Piles in sand, silt and clay.	Piles in sand, silt and clay.	100	1948	5,596,000
Lock and dam 4	752.8	Alma, WI	110	600	8.0	675.0	17.0	14.0	Piles in sand, silt and clay.	Piles in sand, silt and clay.	100	1938	5,596,000
Lock and dam 5	738.1	Minneiska, MN	110	600	7.0	667.0	17.0	13.0	Piles in sand and gravel.	Piles in sand and gravel.	100	1935	4,865,000
Lock and dam 5A	728.5	3 above Winona, MN	110	600	9.0	660.0	18.0	12.0	Piles in sand and gravel.	Piles in sand.	100	1935	5,081,000
Lock and dam 6	714.3	Trempealeau, WI	110	600	5.5	651.0	18.0	12.5	Piles in sand.	Piles in sand.	100	1936	4,549,000
Lock and dam 7	702.5	Dresbach, MN	110	600	6.5	645.5	17.0	12.5	Piles in sand, gravel and silt.	Piles in sand and clay.	100	1936	4,874,000
Lock and dam 8	679.2	Genoa, WI	110	600	8.0	639.0	18.0	12.0	Piles in sand, gravel and silt.	Piles in sand.	100	1937	5,574,000
Lock and dam 9	647.9	3.3 below Lynxville, WI	110	600	11.0	631.0	22.0	14.0	Piles in sand, gravel and broken rock.	Piles in sand and gravel.	100	1937	6,061,000
Lock and dam 10	615.1	Guttenberg, IA	110	600	9.0	620.0	16.0	13.0	Piles in sand.	Piles in sand.	100	1938	6,539,000
Lock and dam 11	583.0	3.7 above Dubuque, IA	110	600	8.0	611.0	15.0	12.0	Piles in sand, gravel and silt.	Piles in sand.	100	1936	4,750,000
Lock and dam 12	556.7	Bellevue, IA	110	600	11.0	603.0	18.5	12.5	Piles in sand, gravel and silt.	Piles in sand.	99	1937	7,428,000
									Piles in sand and gravel.	Piles in sand and gravel.	99	1938	5,580,000

TABLE 17-C
(Continued)

LOCKS AND DAMS

Lock and Dam	Miles Above Ohio River	Miles from Nearest Town	Lock Dimensions			Upper Normal Pool Elevation ¹	Depth on Miter Sill		Character of Foundation Complete		Percent Locks, Dams, and Work in Pool	Year Opened to Navigation	Estimated Cost of Each Lock and Dam Including Work in Pool
			Width of Chamber (feet)	Greatest Length Available for Full Width (feet)	Lift (feet)		Upper (feet)	Lower (feet)	Lock	Dam			
Lock and dam 13	522.5	4.3 above Clinton, IA	110	600	11.0	583.0	19.0	13.0	Piles in sand, clay and gravel.	Piles in sand and gravel.	100	1938	7,502,000
Lock and dam 14	493.3	3.7 below Le Claire, IA	110	600	11.0	527.0	20.5	13.5	Rock.	Rock.	92	1939	6,284,000
Le Claire Lock (Canal)	493.1	3.9 below Le Claire, IA	80	320	11.0	--	17.6	10.9	Rock.	Rock.	100	1922	-- ¹⁰
Lock and dam 15	482.9	Foot of Arsenal Island, Rock Island, IL	110	600	16.0	561.0	24.0 ¹¹	11.0	Rock.	Rock.	100	1934	14,201,000
			110	360	16.0	--	17.0 ¹¹	11.0					
Lock and dam 16	457.2	1.8 above Muscatine, IA	110	600	9.0	545.0	17.0	12.0	Piles in sand and gravel.	Piles in sand and gravel.	98	1937	9,788,000
Lock and dam 17	437.1	4.2 above New Boston, IL	110	600	8.0	536.0	16.0	13.0	Piles in sand and gravel.	Piles in sand.	99	1939	5,843,000
Lock and dam 18	410.5	6.5 above Burlington, IA	110	600	9.8	528.0	16.5	13.7	Piles in sand.	Piles in sand.	90	1937	10,308,000
Lock and dam 19	364.2	Keokuk, IA	110	358	38.2	518.2	4.5	9.2	Rock.	Rock.	100	1913	
			110	1,200			5.0	13.0			99	1957	¹⁴ 813,000 ¹²
Lock and dam 20	343.2	0.9 above Canton, MO	110	600	10.0	480.0	15.0	12.0	Rock.	Rock and piles in sand and gravel.	97	1936	6,281,000
Lock and dam 21	324.9	2.1 below Quincy, IL	110	600	10.5	470.0	16.5	12.0	Piles in sand and gravel.	Piles in sand and gravel.	95	1938	8,065,000
Lock and dam 22	301.2	1.5 below Saverton, MO	110	600	10.2	459.5	18.0	13.8	Rock.	Rock.	99	1938	5,275,000
Lock and dam 24	273.4	Clarks ville, MO	110	600	15.0	449.0	19.0	12.0	Rock and piles.	Piles in sand.	99 ¹⁴	1940	10,337,000
Lock and dam 25	241.4	Cap Au Gris, MO	110	600	15.0	434.0	19.0	12.0	Piles in sand and gravel.	Piles in sand and gravel.	99 ¹⁴	1939	13,694,000
Lock and dam 26 (Henry T. Rainey Dam) ¹⁵	202.9	Alton, IL	110	600	24.0	419.0	19.0	10.0	Piles in sand.	Piles and sand.	100	1938	12,824,000
			110	360	24.0	--	16.0	10.0					

TABLE 17-C
(Continued)

LOCKS AND DAMS

Lock and Dam	Miles Above Ohio River	Miles from Nearest Town	Lock Dimensions			Upper Normal Pool Elevation ¹	Depth on Miter Sill		Character of Foundation Complete		Percent Locks, Dams, and Work in Pool	Year Opened to Navigation	Estimated Cost of Each Lock and Dam Including Work in Pool
			Width of Chamber (feet)	Greatest Length Available for Full Width (feet)	Lift (feet)		Upper (feet)	Lower (feet)	Lock	Dam			
Melvin Price Locks and Dam	200.8	Alton, IL	110	1,200	24.0	419.0	23.0	18.0	Piles to bedrock.	Piles to bedrock.	98	1990	752,760,000
Melvin Price Locks and Dam (2nd Lock)	200.8	Alton, IL	110	600	24.0	419.0	42.0	18.0	Piles to bedrock.	Piles to bedrock.	93	1994	226,000,000
Total, Locks and dams													\$1,196,556,000

1. Elevation of Pools 1 to 22 and at St. Anthony Falls are mean sea level 1912 adjustment: Pools 24, 26 are mean sea level 1929 adjustment.

2. Includes existing dam, owned by Northern States Power Co.

3. Includes dredging above upper lock. (Federal cost only.)

4. Based on pool elevation 723.1 in Pool 1 which is crest of dam. Pool is normally maintained at elevation 725.1 by flashboards.

5. Includes lower approach dredging and dredging between upper and lower rock. (Federal cost only.)

6. In addition \$1,948,000 expended from previous projects and \$1,349,600 from O & M appropriation for first of twin locks. Excludes lock and dam rehabilitation program.

7. Old upper guard sill.

8. Landward lock.

9. In addition, \$1,965,300 expended from previous projects.

10. Existing Le Claire Canal lock is used as auxiliary to lock 14; previous project cost \$540,000.

11. Depth over upper poiree sill. Depth over upper miter sill is 27 feet, at lock 15.

12. \$640,868 for first lock was reported by Mississippi River Power Company, transferred to Government free in lieu of improvements destroyed. (Annual Report, 1928, pp. 1118-1119.) Present estimate includes \$13,132,600 for main lock and appurtenant work.

13. Includes cash contribution of \$4,900,000.

14. Complete except for guidewall extensions.

15. Lock and Dam 26 has been replaced by the Melvin Price Locks and Dam at which full pool was raised 1 February 1990. Lock and Dam 26 has been removed.

TABLE 17-D

HARBOR IMPROVEMENTS

Name	Miles above Ohio River	Location	Type	Project depth (feet)	Approximate size (feet)		Percent Complete	Estimated Cost
					Width	Length		
St. Paul Harbor, MN	836.5-839.2	In city of St. Paul, MN	Commercial	9	400-1,000	2.7(mile)	100	\$ 217,100
	839.7	Channel improvement, Small-boat harbor and channel enlargement.	Small-boat	5	300	400	100	230,200
Hastings Harbor, MN	813.2	Lower end of city of Hastings, MN	Small-boat	5	200	500	100	74,300
Red Wing Harbor, MN	791.4	In city of Red Wing, MN	Commercial	9	300	1,200	100	146,800 ¹
Red Wing Harbor, MN	791.1	In city of Red Wing, MN	Small-boat	5	450	800	100	8,700
Bay City Harbor, WI	785.9	Upper end of Bay City, WI	Small-boat	5	50-100	5,990	100	39,400 ²
Lake City Harbor, MN	773.0	In city of Lake City, MN	Small-boat	5	400	600	100	93,500
			Commercial ³	9	500	1,000	100	
			Small-boat ³	9	500	850	100	1,077,000 ⁴
Pepin Harbor, WI	767.1	In city of Pepin, WI	Small-boat	5	50	600	100	205,500 ⁵
Wabasha Harbor, MN	760.0	Upper end of city of Wabasha, MN	Small-boat	5	175-400	800	100	41,700
Alma Harbor, WI	751.3	Upper end of Alma, WI	Small-boat	5	300	500	100	56,300
Winona Harbors, MN	726.0	In city of Winona, MN	Small-boat	5	200	1,000	100	89,800
Lansing Harbor, IA	726.2	Crooked Slough	Commercial	9	200	6,000	100	84,700
	663.3	Upper end of city of Lansing, IA	Small-boat	5	170	500	100	95,300
Prairie du Chien Harbor, WI	635.5	Upper end of city of Prairie du Chien, WI	Small-boat	5	400	800	100	85,500
	635.0	In Marais de St. Friel East Channel below Hwy bridges.	Commercial	9	--	1,000 frontage	100	93,100
Dubuque Harbor, IA	579.4	At Dubuque, IA	Commercial	12	340	1,500	100	55,200
Savanna Harbor, IL	537.3	At Savanna, IL	Small-boat	5	280	910	0	310,000
Clinton Harbor, IA	519.0	At Clinton, IA	Small-boat	5	400	1,400	78	101,912
Moline Harbor, IL	488.0	At Moline, IL	Small-boat	5	230	660	100	110,328
Davenport Harbor, IA (Lindsay Park)	484.2	At Lindsay Park	Small-boat	5	200	1,150	--	262,100
Rock Island Harbor, IL	479.8	At Rock Island, IL	Entrance channel small-boat harbor	6	100	1,100	100	31,000
Andalusia Harbor, IL	473.0	Andalusia Slough	Small-boat	5	40	435	100	21,000
Muscatine Harbor, IA	455.5	At Muscatine, IA	Small-boat	5	150	950	100	353,000
	455.6		Freight terminal approach channel	9	200	1,890	100	
Fort Madison Harbor, IA	383.7	At Fort Madison, IA	Small-boat	5	250	900	100	184,200

**TABLE 17-D
(Continued)****HARBOR IMPROVEMENTS**

Name	Miles above Ohio River	Location	Type	Project depth (feet)	<u>Approximate size (feet)</u>		Percent Complete	Estimated Cost
					Width	Length		
Warsaw Harbor, IL	359.1	At Warsaw, IL	Small-boat	5	100	600	100	73,000
Quincy Harbor, IL	327.3	In Quincy Bay, IL	Small-boat	5	200-300	9,000	0	-- ⁶
Hannibal Harbor, MO	308.8	At Hannibal, MO	Small-boat	5	180-260	600	100	129,000
Total								\$4,269,640

1. In addition, local interests contributed \$3,455.

2. In addition, local interests contributed \$9,533.

3. Commercial harbor converted to small-boat harbor under authority of Section 107 of 1960 River and Harbor Act, as amended. Primary use is small-boat, although some commercial activity exists.

4. In addition, local interests contributed \$812,599.

5. In addition, local interests contributed \$32,344.

6. Maintenance only, estimated at \$5,000 annually.

**TABLE 17-E ADDITIONAL FEATURES ENTERING INTO
COST OF PROJECT**

Facilities for public use, convenience and safety	\$ 3,348,200
Rectification of damages caused by seepage and backwater	7,049,700 ¹
Regulating works between Melvin Price Locks and Dam and Missouri River	545,000
Improvement of Beaver Slough at Clinton, Iowa, for navigation	193,600
Miscellaneous	1,312,900 ²
Total additional features	12,449,400 ³
Total existing project (new work)	\$ 1,180,966,368

1. Includes a lump-sum payment of \$2,146,800 (O&M appropriation) paid to the Sny Island Levee Drainage District, IL, for rectification of seepage damages. Also includes \$140,000 Construction General funds for project studies, evaluation, and report preparation.
2. Includes \$686,500 for repairs to Stone Arch Bridge, Minneapolis, MN. (FY 1969)
3. Excludes \$227,000 (1965) for inactive remedial measures at Sandy Slough, MO.

**TABLE 17-F LICENSE FEES COLLECTED
FOR FISCAL YEAR 2004**

Dam	Licensee	Annual Charge
St. Anthony Falls Lower Lock and Dam	Northern States Power Co. (No. 2056)	\$ 3,300
Lock and Dam No. 1	Ford Motor Co.	95,440
Lock and Dam No. 2	City of Hastings, MN.	\$16,431

1. During the FY 2003 statement reporting period (10/01 to 9/02), the hydroelectric plant was still undergoing repairs from the 2001 flood damage and did not generate electricity, resulting in non government dam charge on 2003 statement.

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1. Deauthorized FY 75.
2. Inactive.
3. Deauthorized FY 87 (WRDA of 1986).
4. Guidewalls at Locks 3, 4, 5, 5A, 7, 8, 9, and 10 deauthorized FY 87 (WRDA of 1986).
5. Deauthorized FY 90 (WRDA of 1986).
6. Guidewall extensions at Locks 16, 18, and 21; construction of mooring facilities at Locks and Dams 11, 12, 14, 15, 16, 17, and 18; upper approach improvement at Lock 19 and Lock and Dam 20; and rock and/or conglomerate excavation in Pools 14, 18, and 21 deauthorized FY 90 (WRDA of 1986).